A RECREATION MANAGEMENT PLAN FOR

RED ROCK CANYON

RECREATION LANDS

PREFACE

The preparation of a master plan for recreation administration, resource management, and development of the Red Rock Recreation Lands represents the culmination of countless hours of planning efforts by the Bureau of Land Management in cooperation with the Nevada State Parks Division while guided by the suggestions of many interested user groups and individuals.

The plan at this stage is a point of departure for an on-going program with updating based upon continual assessment of user trends, public response, and resource capacities for developments.

Throughout plan preparation, the basic planning elements were subject to both facts and planning assumptions. Certain assumptions related to water resources, visitation, optimum resource capacity, landscape consideration, adequate funding, cooperative opportunities are vital controls to the full implementation of the master plan. It is with these assumptions in mind that we cautiously move forward in the action phases of the plan.

Water - The availability of adequate water resources is a controlling and vital limitation. Knowledge of this resource is prerequisite to practically all phases of the master plan. In fact, water information in Nevada is so important it should precede master planning in all instances. Should a water feasibility study prove negative or economically infeasible, a shift in development emphasis would be necessary.

Visitor Use - Also assumed in the planning effort was the projection of future visitor use in the area. The proposed developments are based upon both anticipated visitor use figures as well as the estimated development capacity of the resource. Both of these variable assumptions must be continually reassessed through actual visitor use counts and preference surveys prior to any development. When such developments are deemed necessary, thorough landscaping considerations will be made, keeping in mind the basic theme of the planning concept -- the area is set aside for its unique natural features and any developments must be commensurate with preservation and enhancement of those features.

← Aerial view of the Red Rock escarpment

Financing - Basic to the total planning and development concept is the necessity for adequate funding by Congress. Financing for plan implementation and updating hinges directly upon appropriations to the Bureau of Land Management.

During a period when governmental expenditures are committed to the accomplishment of significant national and international goals, we can expect some deemphasis of local programs. Thus, schedules for development, such as that proposed for Red Rocks, may require adjustment and deferment.

Cooperative Opportunities - Cooperation has been the cornerstone of the Red Rock Canyon Recreation Lands development since its inception several years ago. Unquestionably this cooperation will be continued and strengthened as the phases of the master plan for development are brought into existence. The State of Nevada, through its several administrative organizations and political subdivisions, has contributed much to the Red Rock Canyon Recreation Lands development and it is expected that its role will be expanded in the future.

Plan Maintenance - It is further assumed that a procedure will be developed for plan updating. The plan will be continually analyzed and reviewed, and this data will be used in the modification procedure. This updating process would resolve differences between the current plan and future assessment of planning elements based upon trends, modifications, and public response.

In summary then we are presenting a blueprint for administration, management, and development of the Red Rock Canyon Recreation Lands. The plan should be viewed as a tool for action with enough flexibility to be cognizant of new directions of thought based upon a continual review by planners guided by public preference, resource capacities, and adequate financing.

/s/ Dennis E. Hess
Recommended, District Manager

/s/ Nolan F. Keil
Approved, State Director

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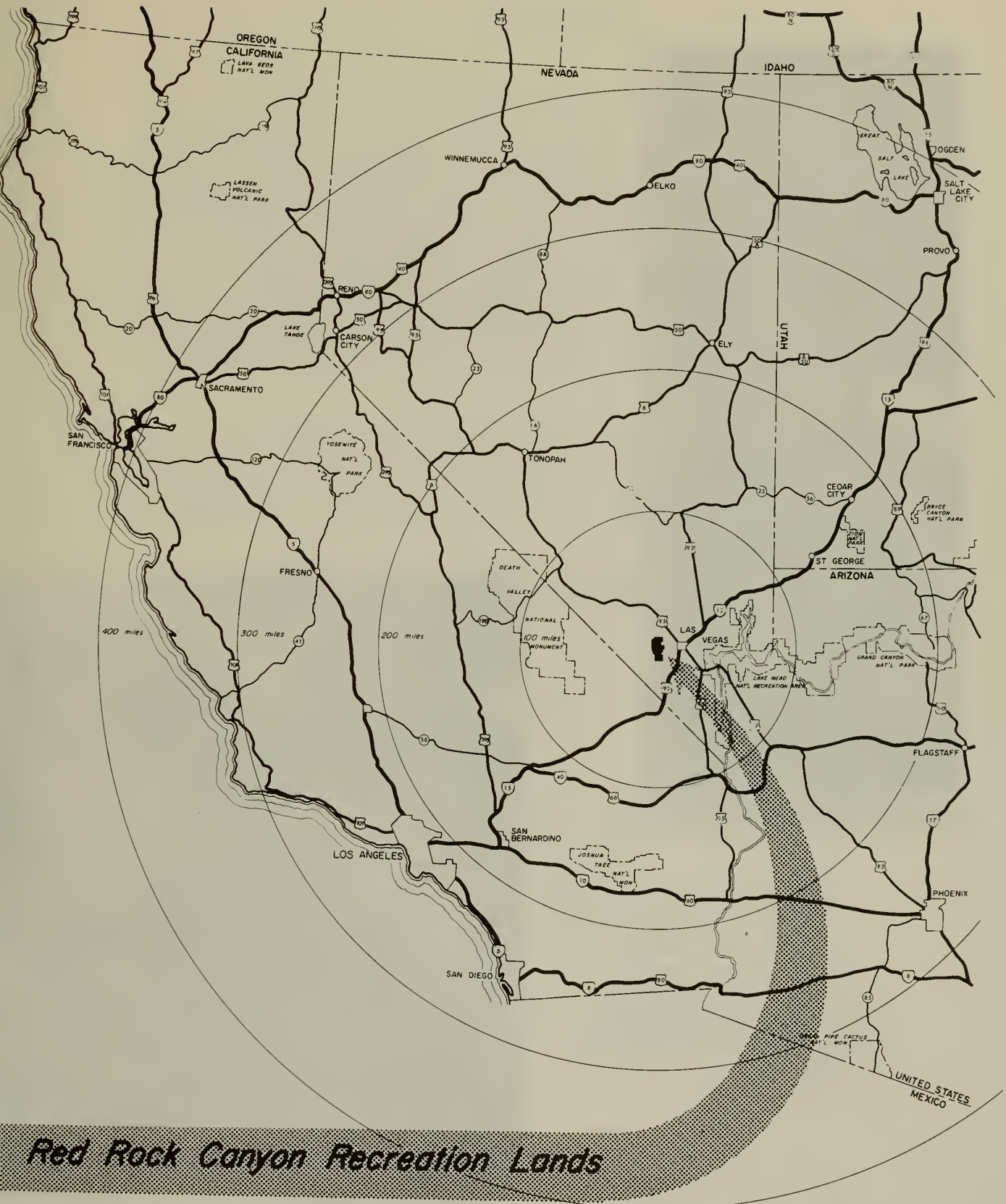
Desert vegetation enhances a view of the Red Rocks

Las Vegas in the foreground - Red Rocks in the background



Red Rock Canyon Recreation Lands

Unique vegetation backed by majestic cliffs are the big attractions in Pine Creek Canyon.

Archeological remains such as these found in the Brownstone area are important recreation resources which must be protected.

INTRODUCTION

The splendor and enchantment of the Red Rock Canyon Recreation Lands have become increasingly popular in recent years. The abundance of natural values includes unique examples of ecological and geological processes. In addition, early habitants of the area have left a wealth of archeological sites. These attractions have seemed to create a magnet for recreational use by people from Clark County, all Nevada and visitors from other states.

This influx of visitors has accounted for a veritable Pandora's Box of recreational activity. Picnicking, camping, hiking, horseback riding, rock climbing, nature study, rock hounding and photography are some of the more active pursuits. Exclusive of these, the area generates considerable aesthetic appeal.

Proper utilization of the area by the public is paramount; for without this, the very attractions the visitor comes to enjoy will be lost. It is for this reason, that a master plan for management and development has been prepared. With a continued planning process throughout the coming years, these guidelines can be effective.

The purpose of this master plan is to provide a logical blueprint of effective recreation developments meeting the needs of the visitor and consistent with the capacity of the resource.

The specific objectives of this master plan are:

(1) To designate quality recreation facilities commensurate with the identified needs of the general public.

(2) To protect, enhance and maintain the natural beauty of the area to ensure the visitor with a meaningful and quality recreation experience.

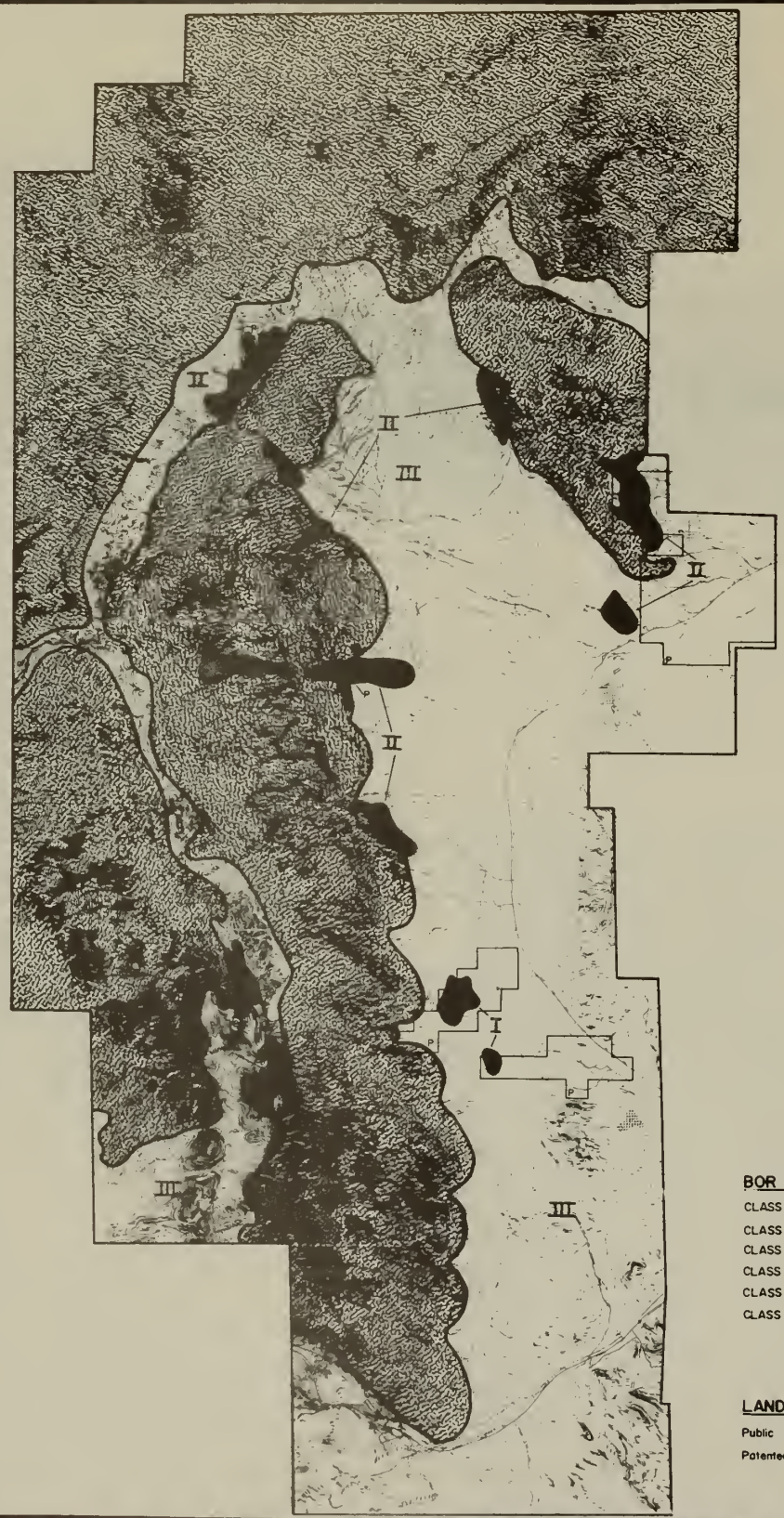
(3) To ensure the integrity of the resource by providing no more than the optimum number of recreation facilities compatible with the capacity of the resource.

(4) To designate areas of restricted use where the archeological, ecological, and geological values can dictate, for education and research in conjunction with the basic objectives of general recreation.

(5) To develop a program of interpretation and information to acquaint the public of the needs for preservation and conservation of the area and to assist the visitor in more fully enjoying and understanding the natural and historical aspects of the area.

(6) To ensure that the common goals for the implementation of the plan are carried out through coordination and cooperation with other Federal, state, and local governments and various interested user groups.

Section A RESOURCE MANAGEMENT



BOR CLASSES

CLASS I	121 Acres
CLASS II	1,182 Acres
CLASS III	32,456 Acres
CLASS IV	18,681 Acres
CLASS V	25,568 Acres
CLASS VI	sites too small to define in acres (see cultural overlay)

LAND STATUS

Public Domain

Patented P

LEGEND

- Wild Areas
- Open Space - Corridor Areas
- Natural Areas
- Recreation Development Areas
- Commercial Public Service Areas
- Administrative Areas

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

RESOURCE MANAGEMENT UNITS

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED

NAME	DATE

RECOMMENDED Bernard E. Hess DISTRICT MANAGER

APPROVED Helen J. Neil STATE DIRECTOR

APPROVED Eric R. Crowhurst NEVADA STATE PARK ADMINISTRATOR

SCALE 1 1/2 0 1 2 3MI

DATE

SHEET 1 OF 6

DRAWING NO

RESOURCE MANAGEMENT

CONTENTS

RESOURCE MANAGEMENT

1. Resource Protection and Development

a. Geological Features. The beauty and grandeur of the multicolored sandstone formations are the primary recreation attraction in this area. All developments and programs will be designed to accent and enhance the natural beauty of the colorful sandstone formations. Uses, developments, and/or development practices which deface or otherwise detract from the natural beauty of these formations will not be allowed. Trail development and directional and interpretive signs will be allowed but will be designed and installed so as to harmonize with the natural environment.

b. Vegetative Cover. The vegetative cover enriches and adds accent to the total environment of the area. The vegetative species shall be managed so as to encourage optimum growth and reproduction of the natural species with a minimum of interference of the natural processes. Domestic livestock grazing and wildlife use shall continue, based on sound management programs as set forth in the range allotment plans and the wildlife management plan. These management plans will conform with the constraints established in this and other sections of the recreation management plan. Artificial revegetation practices such as chaining, railing, plowing, spraying, etc. are not to be allowed. Browse and forage production will be controlled by placing emphasis on management practices such as rest rotation systems, altering seasons of use, controlling populations, etc.

A program will be developed for revegetating scarred areas such as abandoned roads, etc. with native vegetation, using plant materials which are in character for each area.

Tree planting is encouraged, using native species, in recreation development areas providing water is available for irrigation (see water allocation priorities in part "e" below).

c. Wildlife. Wildlife is an important part of the recreation scene. Emphasis shall be given to increasing the wildlife populations. Where conflicts exist between wildlife and domestic livestock use, priority will be given to wildlife.

Visitor use studies for this area indicate that "wildlife observation" will be much more in demand than hunting. The wildlife management plan will, therefore, give major emphasis to the "observation" angle of wildlife use. Where conflicts exist between hunting and wildlife observation, priority will be given to managing wildlife for observation purposes.

The wildlife management plan will give equal emphasis to both game and non-game species. Species of particular importance are:

Desert Bighorn Sheep
Deer
Quail
Rabbits
Resident and migrant bird populations

(For details on hunting and use of firearms see Items "g" and "h" on page 7-B in the Visitor Management section.)

d. Wild Burro. Although the wild burro is not considered a wildlife species, it is a wild creature and will require a special management program similar to that provided for wildlife species. The wild burro is considered an important recreation attraction and should be retained as such. The size of the burro herd and other management considerations will be determined jointly when forage, water, and other requirements are considered for livestock and wildlife.

e. Cultural Features. A protection program will be initiated to help preserve and conserve the antiquities values in place in the Red Rocks. Development should avoid antiquities values, but in cases where this is impossible and development is vital, salvage excavation will be carried out. Salvage excavation will be necessary at the following sites prior to development.

Red Springs
Sandstone Quarry
Lost Creek
Ice Box

Detailed survey work will be completed at all other development sites prior to development. It is very likely that salvage excavation will have to be completed at several additional sites based on the outcome of the survey work.

Restoration of prehistoric rock art may be necessary in some instances, but until more is known about techniques no restoration should be attempted except as an extreme emergency measure. Protection of rock art will be accomplished through the interpretive program and, in some cases, with 4-foot high chain link fences strategically placed to keep visitors a safe distance back from the art work so they can not easily mark it up.

e. Water. Surface water in this area is scarce and much in demand to sustain the plant and animal communities, as well as to meet human needs. Priority will be given to preserving the surface water in an "as is" condition. Well water will be the preferred source of water for human use.

Water will be allocated on the following priority basis:

Priority #1 - Human consumption
Priority #2 - Wildlife and livestock consumption
Priority #3 - Maintaining streamside vegetation
Priority #4 - Irrigation purposes (tree planting in development areas)
Priority #5 - Flush toilet and shower facilities, etc. (Exceptions to this are the Interpretive Center, Administrative areas, and the two commercial areas, where flush facilities are mandatory)

2. Management Units. (See the Management Unit Drawing for location of individual units.)

a. Wild Areas. These areas shall be dedicated to preserving the wilderness experience. Improvements in this area shall be restricted to trail development, primitive camp and picnic sites, rustic interpretive and directional signs, primitive facilities for visitor protection and safety, and other facilities which are essential for visitor and resource protection in a wilderness environment, such as fire suppression facilities. No motorized vehicles will be allowed in this zone.

Other uses such as livestock grazing, watershed protection, and wildlife development are permitted but must abide by the constraints established in this and other sections of the plan.

b. Open Space - Corridor Areas. The primary function of this area is to provide the spacial area from which the scenic attractions can be viewed. Vehicular traffic will be permitted in this area but will be restricted to designated roads and trails. Roads will be located so as to offer the best views and yet be unobtrusive. Improvements in this zone, with the exception of roads and trails, will generally be on the perimeter and concealed so as not to mar the view. The color, texture, and height of all structures within this area will be designed and constructed so as to harmonize and blend in with the immediate environment.

Other uses such as livestock grazing, watershed protection, and wildlife development are permitted but must abide by the constraints established in this and other sections of the plan.

c. Natural Areas. These are areas where special management programs must be developed to preserve, protect, and study natural resources and/or processes. Two such areas have been established in the Red Rocks as follows:

Pine Creek Natural Area. The entire North Fork of Pine Creek is set apart exclusively for scientific study and protection of the ecological community. All recreation use shall be excluded from this area. The Bureau shall control the use in this area by issuing special land use permits or some other suitable control system.

Lone Pine Natural Area. The Lone Pine area has an intermingling of the four major plant communities in the Red Rocks area. This area will be preserved for public viewing and study. Detailed programs will be developed to protect, preserve, and interpret this unique ecological community.

d. Recreation Development Areas. Sites where intensive recreation activities are planned fall in this area. Improvements which are allowed in these areas include campgrounds, picnic sites, overlooks, interpretive facilities, active play and recreation areas, and other compatible recreation facilities.

e. Commercial Public Service Areas. A commercial public service area is a tract of land where public services and accommodations will be provided. Uses permitted in these areas are outlined in Items 13 and 17 of the Development Area Narrative, pages 7-E and 9-E.

f. Administrative Areas. An administrative area is a tract of land where facilities will be located which are necessary for the administration and management of the area. Uses permitted in these areas are outlined in Item 3 of the Administrative Management section, pages 2-C and 3-C.

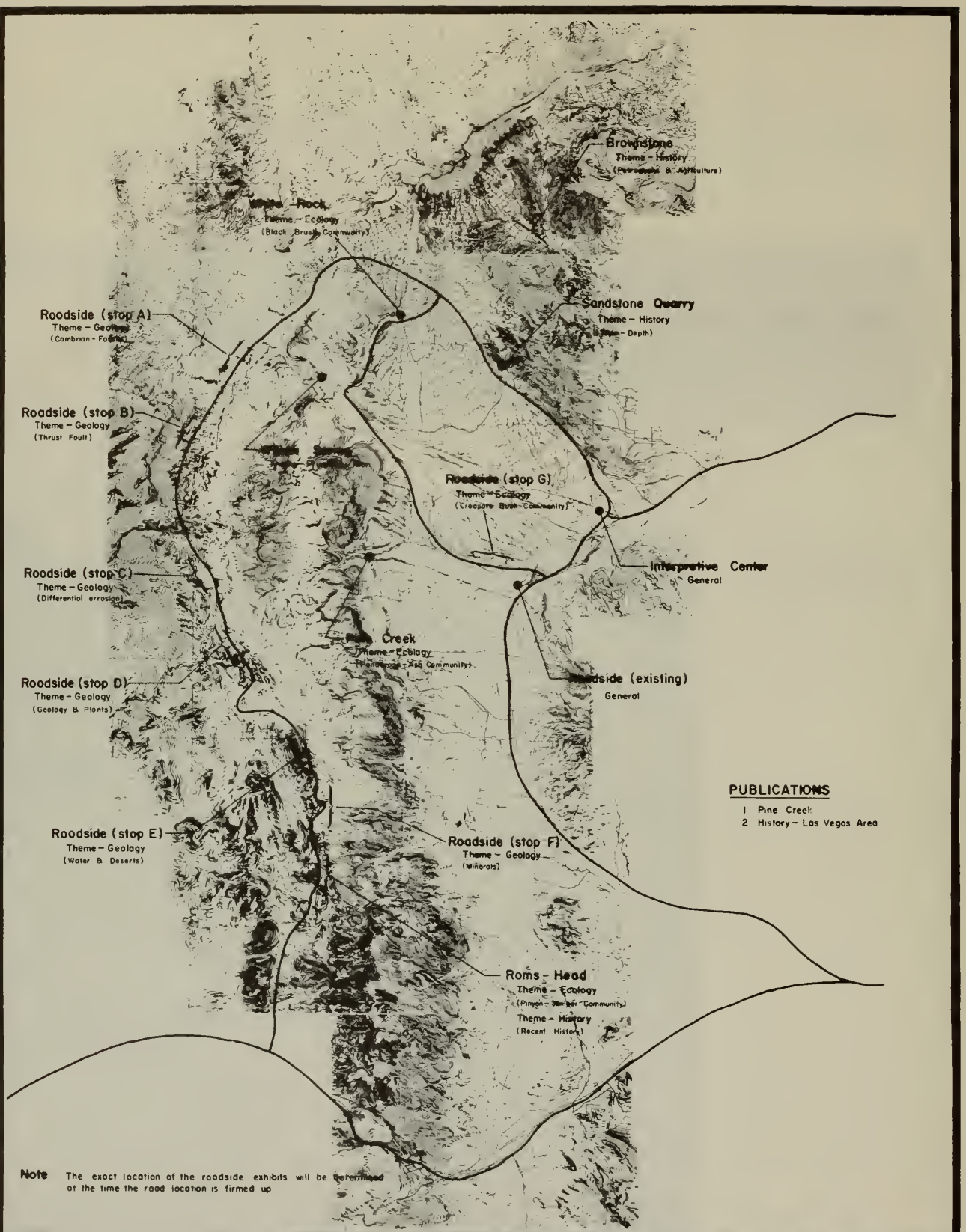
3. Land Acquisition. (See the land status on the Management Unit Drawing.) The goal is to acquire--through exchange if possible--all private inholdings within this area except the small tract lands in the $SE\frac{1}{4}$ $SW\frac{1}{4}$ sec. 6, T. 21 S., R. 59 E, and the Girl Scout lands in the $SE\frac{1}{4}$ $NE\frac{1}{4}$, $NE\frac{1}{4}$ $SE\frac{1}{4}$, sec. 1, T. 21 S., R. 58 E. The Pine Creek, La Madre Canyon, and Ash Creek properties all have exceptional potential for intensive recreation development; and in each case, the private lands also block access to areas of high recreation value on public lands. The "old Wilson Ranch" and the Bonnie Springs Ranch both have potential for development as lodge and dude ranch facilities respectively, but the primary justification for acquisition is to protect the integrity of the natural features. These properties adjoin the Blue Diamond Scenic Loop road; and if indiscriminate use or improvements were allowed, the spectacular view of the Red Rock escarpment would be seriously impaired. The same rationale applies for the Oliver Ranch and the Howard Hughes property at the main entrance to the Red Rocks area.

Acquisition of the private inholdings would also clear up all the surface water problems in the area, since the water rights would be conveyed with the property.

4. Classification Needs. This entire area has been classified for retention under Classification and Multiple Use Act. No change is recommended in the present classification.

A view from the Sand Stone Quarry Picnic Site

Section B VISITOR MANAGEMENT



Note The exact location of the roadside exhibits will be determined at the time the road location is firmed up

LEGEND

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

INTERPRETIVE DEVELOPMENT DRAWING

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED	
NAME	DATE

RECOMMENDED _____ DISTRICT MANAGER

APPROVED _____ STATE DIRECTOR

APPROVED _____ NEVADA STATE PARK ADMINISTRATOR

SCALE 1 1/2 0 1 2 MILES

DATE

SHEET 2 OF 6

DRAWING NO.

V I S I T O R M A N A G E M E N T

CONTENTS

VISITOR MANAGEMENT

1. Information Program

a. Interpretive Center. The Interpretive Center will be the keystone in the information program because of its location on the major entrance road into the area. The building will contain a manned information desk where verbal and published information will be dispensed. Such information aids as cartridge-operated projectors, wall maps, state, regional, and local recreation publications and others will be readily available to the public.

b. Entrance Roads. Information-dispensing devices will be established on each of the two other entrance roads, soon after the roads enter the recreation area boundaries. These will be structures large enough to be noticeable, possibly even large enough to be manned if fee collecting dictates. Detailed information on the recreation area and its facilities will be made available to the public via such things as permanent displays and publication dispensers. A special plea will be made here for the visitor to use the Interpretive Center also.

c. Publications. The dedication information leaflet will be expanded to cover all facility locations and uses as these are developed. A special attempt will be made, via the leaflet, to indicate the type of outdoor manners most visitors consider acceptable in a recreation area of this type.

For the wilderness explorer and hiker, a detailed map of the area with trails, landmarks, and water prominently marked, will be developed.

2. Interpretive Programs. In general, the interpretive program will present an integrated program based on the themes below. It is visualized that the outdoor interpretive devices will mostly be vandal-proof types involving routed aluminum and metal photo signs, with some routed wood signs. Experience with the present interpretive device will help dictate future use. Nature trails, both long and short, guided and unguided, will be developed. Museum exhibits, display exhibits, and audio-visual materials will be used in areas which offer maximum protection from vandalism.

a. Themes

Geology. The great Keystone thrust fault and overturned sandstone formations. How they occurred and contributed to the present landscape.

Ecology. The various life communities present, how they interrelate with each other, the geology, and primitive man.

History. Events of man's past use of the area as indicated by Indians, Spanish, mountain men, Mormons, and cattlemen's history.

Fauna. The unusual desert animals to be observed, such as the Desert Bighorn, and a wide variety of bird life.

b. Interpretive Center. The Interpretive Center is conceived of as a multi-purpose building with space for a lobby, information desk, toilets, exhibits, small auditorium, administrative offices, and storage. Interpretive exhibits here will be general in scope and somewhat more complex than the interpretive devices along the road system, because of the vandalism problem on the roads. The exhibits should be quite graphic, with use of motion to show development and interrelationship. Movies, models, museum exhibits, slide programs, mechanical devices, and a native plant garden are suggested to tell the stories.

Geology. The story of the depositions and later earth movements over the broad region that formed the Red Rock area.

Ecology. The interrelationship of the various life communities with each other, and the geology and the uniqueness of the area in this regard.

History. The tools, arts and crafts of the people inhabiting the area, particularly in past times, and the ecological niche man has occupied throughout time here.

General. The interpretation can be bolstered and emphasized at the Interpretive Center through landscaping with native plants, use of pictograph and petroglyph reproductions and local artists' paintings of the area in the building decor, ample glass to utilize the view, and identification devices to show points of interest. An adjunct to the interpretive program will be an outdoor amphitheater-campfire type arrangement seating 50 to 75 people for night use in presenting programs of interest.

Public Relations. An exhibit on the concepts and programs of the Nevada Park System, Clark County, and the Bureau of Land Management will be presented in the building.

c. Sandstone Quarry

History. Using the mescal pits, cave, and petroglyphs available in the area, the time-depth and history of the Indian cultures in the area will be told.

Salvage excavation will be done on the mescal pits and the cave. No trail system is visualized, but an introductory device showing where the sites are would help preserve the feeling of discovery and exploration now prevalent in the area.

d. Brownstone Area

History. The emphasis will be on horticulture as practiced by the Paiutes and as possibly shown by the petroglyphs and pictographs in the area. The native art form will be stressed also.

e. Crestline Drive. See Interpretive Development Drawing for approximate location of stops.

Geology

Stop A. The story of the Cambrian formations as told through a good fossil deposit.

Stop B. An intimate look at the thrust plate and what it accomplished.

Stop C. Differential erosion as shown by the "Natural Bridge," pot holes, and other intimate erosional features of the sandstone area.

Stop D. The effect of geology on the plant life, as shown by growth in the canyons that cut back into the escarpment.

Stop E. The story of water in the desert, as shown by the location of Las Vegas and the valley ranches.

Stop F. Mineralization and use in the area as shown by the mining activity at the Blue Diamond mine.

Ecology

Rams-head: Pinyon-juniper plant community and its place in the ecological scheme.

History

Rams-head: History of Las Vegas and the ranching activities in the area, as shown by the town itself and the ranches visible in the valley below. Will be integrated with geologic story at same stop.

f. Red Rock Scenic Drive

Ecology

White Rock. The black brush community, its significance in desert ecology, and the delicacy of the desert.

Pine Creek. The ponderosa pine - ash community, stressing its part in the desert ecology, particularly the rareness of this particular situation, the reasons for it, and the need for its preservation in the natural area.

Stop G. The Joshua tree - creosote bush ecological community, with emphasis on other deserts as a comparison with the Mohave desert and the various plants that replace one another in the ecological schemes of similar deserts.

Willow Springs. The place of primitive man in the ecology of the area and his use of the various plant communities, as shown by the material remains in the Willow Springs area (mescal pits, pictographs, campsites, etc.) and the varied plant life in one small area (to include Lost Creek). Further salvage excavation is needed to preserve the information available here.

g. Dedication Point. The present interpretation in place here will be retained to tell the overall story of the area and to commemorate the recent history of the area.

h. Wildlife

Somewhere in the area, where feasible, an observation point, possibly with a blind, will be established to observe the bird life, small animals, and the Desert Bighorn. Nighttime observation near a heavily used water hole may provide the best opportunity.

i. Interpretive Publications. The interpretive publications will be cooperative ventures with local professional experts on the subjects.

Ecology. A leaflet on the ecology of the Pine Creek area will be made available. This will be a detailed report written for the layman, to be distributed at Pine Creek and at the Interpretive Center.

History. A popular account of the pre-history and history of the general region, with emphasis on the Red Rocks, will be made available at the Interpretive Center.

3. Visitor Protection. Although much of the Red Rock area is wild and precipitous, inviting people problems, it is, fortunately, within 15 miles of Las Vegas, where many protective services and operations are readily available. Development itself, with its roads, trails, interpretive and information programs, will do much to alleviate present visitor protection problems and cut down future ones.

a. Search and Rescue. Training of key personnel in methods and management of search and rescue is essential because of the nature of the area and its visitor use. Cooperative agreements and pre-planning will be done with local groups and concerns that can be used in search and rescue. Available are such people as state and county law enforcement agents, the U. S. Air Force, rescue squads, helicopter and airplane service companies, Explorer Scout groups, etc. that can be utilized.

b. Law Enforcement. This program will be carried out in close cooperation with the Clark County authorities. Deputization of key recreation area personnel will be done if possible.

c. Patrol. Periodic patrol of the area day and night, seven days a week, keyed to the use patterns that develop, will be an essential part of the visitor protection program.

d. Communications. Area vehicles and the Interpretive Center will be tied to the present BLM radio net. The Interpretive Center and administrative area will be tied to the local telephone system.

e. Sanitation. U. S. Public Health Service standards will be followed in all governmental and concessionaire developments and water supplies to insure visitor health protection.

f. Fire. A program of fire suppression and presuppression for both the natural area and buildings will be established. This will involve training of area personnel in fire hazard inspection and fire control, and the program will be integrated with the present regional programs in effect by BLM, State, and local agencies.

g. First Aid. Training of area personnel in First Aid methods will be considered essential. First Aid kits will be basic equipment in all area vehicles and manned facilities.

h. Traffic Control. Bureau of Public Roads standard traffic control signing and marking will be used.

4. Commercial Accommodations

a. Lodge Area. (See the General Development Drawing for the location.) The commercial accommodations available at Las Vegas, Blue Mountain, and Mountain Spring are adequate to meet the need for many years to come. The proposed lodge area is scheduled in the last development phase. Visitor facilities would include swimming pool, hiking and riding trails, scenic tours, and other resort type facilities as determined compatible.

b. Dude Ranch. It is planned eventually to convert the present guest ranch operation at the south end of the area (see the General Development Drawing) to a concessionaire-operated riding stable.

c. Public Transportation. It is envisioned that, with the completion of the road system in the area, a demand for use of the roads by public carriers will appear. This use will be controlled by permit under applicable Federal and state laws.

5. Recreation Activities

a. Sightseeing. Basic to the sightseeing activities of the visitor is the road system with its pullouts and interpretive devices. Roads will be designed to make maximum use of the dramatic scenery present. The pullouts will be plentiful and at strategic spots to take advantage of visitor needs in relation to the views.

b. Picnicking. Formal picnicking developments will be provided in places where the best recreation advantages of the area are available to the visitor. Informal "tail gate" and roadside picnicking will not be discouraged, however, so long as it is compatible with sanitation and fire control programs.

c. Camping. Formal camping facilities will be provided for both group and family type camping. Group camping will be on a reservation basis if demand dictates. Area personnel should be educated to assist campers in the basic camping techniques where needed. Informal camping will be encouraged in the wild areas.

d. Hiking. Use of all types of trails will be encouraged. Trail systems ranging from nature trail types to wilderness types will be developed. Signing systems and registration stations will be set up for the more difficult hikes to aid in the visitor protection program.

e. Rock Climbing. Although the area is not feasible for technical climbs because of the friable sandstone, there will be some "rock scrambling" type of cross-country hiking. All attempts will be made to make areas of this sort available by signed trail so as to assist the visitor protection program.

f. Horse Riding. Stables will be available in the south end of the recreation area, as mentioned previously. Signed trails and campsites will be developed for the horseman. Facilities such as corrals, water troughs, and hitching rails will be provided.

g. Hunting. It is recommended that hunting be allowed during seasons established by the State Fish and Game Commission. Areas within and adjacent to developed recreation sites shall be closed to hunting.

h. Target Practice. An archery range will be developed in connection with the La Madre development. Use of the facilities by individuals and groups will be on a reservation basis if demand dictates. A free use rifle range will be established outside the general area to the east, accessible to Charleston Avenue. The entire area shall be closed to the use of firearms except during established hunting season. Target practice with guns shall not be allowed in the area at any time.

i. Rockhounding. This program will offer no problems, for there is little petrified wood in the area; and the fossils present are mostly marine and of little scientific significance or of value to the rockhound. No attempts will be made to encourage or discourage this activity.

j. Four-wheel Drive Sightseeing. Use of four-wheel drive vehicles will be encouraged on the more primitive roads in the south end of the recreation area and in the Brownstone area dry washes, at least until a road is built into the latter area. Only signing is indicated to facilitate the program.

k. Outdoor Theater. An area will be earmarked for possible development as an outdoor natural theater, to be operated by a non-profit organization under permit if the operation and development proves feasible and compatible with the recreation area.

Section C ADMINISTRATIVE MANAGEMENT

AREA MANAGER

OPERATION CHIEF

RECREATION SPECIALIST (PROTECTION)

RECREATION SPECIALIST (NATURALIST)

ADMINISTRATIVE ASSISTANT

CLERK - TYPIST (RECEPTIONIST)

C & M FOREMAN

MAINTENANCE MAN

LABORER

RECREATION AID

RECREATION AID

LEGEND

Permanent Staff

Temporary Staff

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

ORGANIZATION CHART

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED

NAME	DATE

RECOMMENDED Ronald E. Hess
DISTRICT MANAGER

APPROVED Helen F. Reid
STATE DIRECTOR

APPROVED Eric R. Cronkhite
NEVADA STATE PARK ADMINISTRATOR

SCALE

DATE

SHEET 3 OF 6

DRAWING NO.

ADMINISTRATIVE MANAGEMENT

CONTENTS

ADMINISTRATIVE MANAGEMENT

1. Staff Requirements. Following are the personnel needed to make operational the plans and programs outlined under the Visitor Management and Resource Management sections. The phasing-in of these personnel is shown on the organizational drawing.

AREA MANAGER is responsible for the overall management of the Red Rock Canyon Recreation Area, in addition to his normal responsibilities for the entire Resource Area. He will be quartered in the District Office.

OPERATIONS CHIEF is responsible for the planning, development, and operations of the area. He should have considerable experience in park management and be capable of supervising people. Upon his shoulders will rest the prime responsibility for implementing the plans and programs outlined in this document. He will have office space in the Interpretive Center.

RECREATION SPECIALIST (Protection) is responsible for administering the resource management and the visitor protection program. Programs he will be responsible for include: (1) resource management; (2) law enforcement; (3) search and rescue operations; (4) patrols; (5) supervision and inspection of concessioner operations; (6) fire protection (in cooperation with the District fire representative); (7) fee collection; and (8) others. He will have office space in the Interpretive Center.

RECREATION SPECIALIST (Naturalist) is responsible for administering the visitor use program including: (1) the planning, development, and placement of information and interpretive material and facilities; (2) presenting fireside talks; (3) conducting tours; (4) development of public relation programs; and (5) others. He will have office space in the Interpretive Center.

ADMINISTRATIVE ASSISTANT is responsible for bookkeeping, clerical services, and other similar administrative support programs for the area. He will have office space in the Interpretive Center.

CLERK-TYPIST will work under the supervision of the administrative assistant but will provide clerical support for the entire staff. Space will be provided in the Interpretive Center for this person.

RECEPTIONIST will be primarily responsible for giving information and direction to the visitor in the Interpretive Center; however, she will also provide clerical support during stack periods. She will be under the supervision of the administrative assistant but will also receive direction from the naturalists. She will operate the information desk in the Interpretive Center.

CONSTRUCTION AND MAINTENANCE FOREMAN is responsible for the maintenance, repair, and minor construction programs in the area. He will have office space in the maintenance area.

MAINTENANCEMEN (Three permanent positions). Each will have separate responsibilities as follows: (1) One is responsible for maintaining the cleanliness of all facilities in the area including collection and disposal of garbage; (2) the second one is responsible for repair and servicing of all facilities and equipment; and (3) the third is in a caretaker role. He is responsible for preventing visitors from entering the natural area in the north fork of Pine Creek. His primary duties will include law enforcement, providing first aid treatment, and giving information and interpretive materials to visitors. He will be stationed at Pine Creek during working hours and will have permanent living quarters in the administrative area.

2. Organizational Structure (See the organizational drawing.)

3. Administrative Facilities

a. Staff Housing

BLUE DIAMOND ADMINISTRATIVE AREA

1 Residence (3-bedroom) for use of the caretaker and his family

1 Apartment building (4-unit) for use of temporary employees during heavy use season

MOUNTAIN SPRING ADMINISTRATIVE AREA

1 Apartment building (2-unit) for use of temporary employees during heavy use season

b. Community Facilities. All the community facilities which are necessary to care for the physical, cultural, and social needs of the area staff are available in Las Vegas, which is less than 15 miles away.

c. Office and Other Associated Facilities

INTERPRETIVE CENTER

Office space for 6 permanent and 2 temporary employees

Storage space for office supplies and interpretive materials

Contact station for fee collection and control

BLUE DIAMOND ADMINISTRATIVE AREA

Maintenance and repair shop

Storage for signs, tables, grills, etc., which will be dismantled during off season

Vehicle storage

Office space for four permanent employees

MOUNTAIN SPRING ADMINISTRATIVE AREA

Fee collection and information distribution facility

Equipment storage facility

Storage for search and rescue equipment

4. Concessioner

a. Lodge Area. All administrative facilities including staff housing, office space, and other related facilities will be located within this area, as depicted on Development Area #2 Drawing. On-site staff housing will be discouraged.

b. Dude Ranch. All administrative facilities will be located within the area, as depicted on Development Area #2 Drawing. Housing will be provided for the wranglers but other service people should be housed off-site.

Section D GENERAL DEVELOPMENT PLAN

Pot holes formed in the sandstone at higher elevations offer relief to the hiker's sore feet.

GENERAL DEVELOPMENT NARRATIVE

CONTENTS

GENERAL DEVELOPMENT NARRATIVE

1. Development Objectives. All recreation developments in the Red Rock area shall be designed to meet resource, visitor, and administrative management needs as outlined in Sections A, B, and C of this plan. Developments which are designed to meet other resource use needs will comply with the constraints as established in this plan.

2. Character of Development. All buildings and associated structures shall follow the theme of the old western ranch-style structures, with low, massive lines. Native materials, especially sandstone, shall be the preferred materials. All structures, including roads, shall be designed and constructed so that they blend into the surrounding landscape. The goal is to retain the landscape as the dominant feature and to subdue the physical developments which must be placed on the land to accommodate recreation and other uses.

3. Development Phases. The term "phase" is used in this plan to represent a logical sequence for facility development (see the general development drawings with overlays). The first phase represents the recreation facilities which should be included in the initial development. The second phase would follow in priority and so forth. This does not mean that all the sites in Phase I will be developed to capacity before development of Phase II begins. Each site should be designed to meet capacity conditions but development should be done in installments. Future trend data on visitor use will provide a better base to determine visitor preferences than we now have; therefore, priority should be given to developing a sound visitor use data base and keying the development program to the visitor trends. This will be difficult initially because there are inadequate facilities available on which objective trend data can be based; but as facility development increases, trend data will become more and more important in guiding the development program.

4. Road System. The road system is schematically located on the General Development Drawing and is located more precisely on the Development Area Drawings. The final road alignment will be established after the road has been placed in the District program and starts through the normal design-construction program cycle. The final alignment will conform as nearly as possible to the alignment shown in this plan. During the final layout of the road, pull-offs and waysides will be selected and will be designed and constructed at the same time the road work is done. There should be an average of one pull-off per mile. The pull-offs may vary from 5 to 30 parking spaces, depending on the space available and the quality of the recreation attraction.

a. Red Rock Scenic Drive

Standard DN-24' surface (paved)

Length Approximately 15 miles

Justification. The Red Rock Scenic Drive will provide access to the following recreation sites: Sandstone Quarry, White Rock Springs, and Rocky Gap. It will provide an intimate view of the brilliant red sandstone formations in the Calico Hills, and spectacular views down the valley of the Red Rock escarpment. It will also serve as the first segment of the Crestline Scenic Drive. It also provides access to the Brownstone area.

b. Crestline Scenic Drive

Standard DN-24' surface (paved)

Length Approximately 20 miles

Justification. The Crestline Scenic Drive takes the visitor into high country of the Red Rocks, where it is cooler and the rugged beauty of the Red Rock escarpment is seen firsthand. The road provides access to numerous scenic overlooks, trails, and a major recreation complex at Rams-head. This road will provide access into the spectacular high country for the old, young, and disabled, who would otherwise never get this opportunity. The location of this road in the high elevations will increase the length of the use season and will encourage greater local and non-local use during the hot summer months.

c. Brownstone Loop Road

Standard SN-14' surface (graveled)

Length Approximately 3.5 miles

Justification. Actual road construction will include only that portion from the Red Rock Scenic Drive to Brownstone reservoir. The road from Brownstone Reservoir to Charleston Avenue will stay right in the wash and will accommodate 4-wheel drive vehicles only. This road will provide access to the numerous archeological sites found in Brownstone Canyon and will also provide back-country pleasure riding, which is an important recreation activity in this area.

5. Trail System

Standards	4 ft. width - no surfacing
Length	Approximately 45 miles

General Comments. Only the primary trunk trail system is shown on the Development Drawings. These trails shall be designed and constructed to accommodate both hiking and horseback use. The trail at the base of the escarpment shall also be constructed to permit powered cycle use.

The location of the trails is approximate. The precise location will be established after the trail has been placed in the District program and starts through the normal design-construction program cycle.

Trail wayside rest stations shall be selected at the time the trail is laid out on the ground. These stations shall range from 3 to 4 miles apart.

6. Utilities Systems

a. Water System. See the comments for each development area in Section E.

b. Irrigation System. Based on present information, tree plantings which would require underground irrigation systems are not feasible at this time. If water does become available from underground sources at a later date, tree plantings with accompanying irrigation systems are desirable at all the development sites in the valley area. Priority should be given to Willow Springs Campground and the Sandstone Quarry picnic sites.

c. Garbage and Refuse. All garbage and refuse will be disposed of at the dump area as shown on the General Development Drawing. The dump shall be of the sanitary land fill type.

d. Sewerage System. All sewerage systems except the Lodge Area will be handled with septic tanks and drainage fields. Additional study is needed to determine the type sewerage system needed for the lodge area.

e. Telephone System. Telephone service will be provided at the following locations:

Interpretive Center
Blue Diamond Administrative Area
Mountain Spring Administrative Area
Lodge Area
Dude Ranch

All of these locations except Mountain Spring Administration Area will also have public telephone service. The telephone lines will be placed underground adjacent to the powerlines.

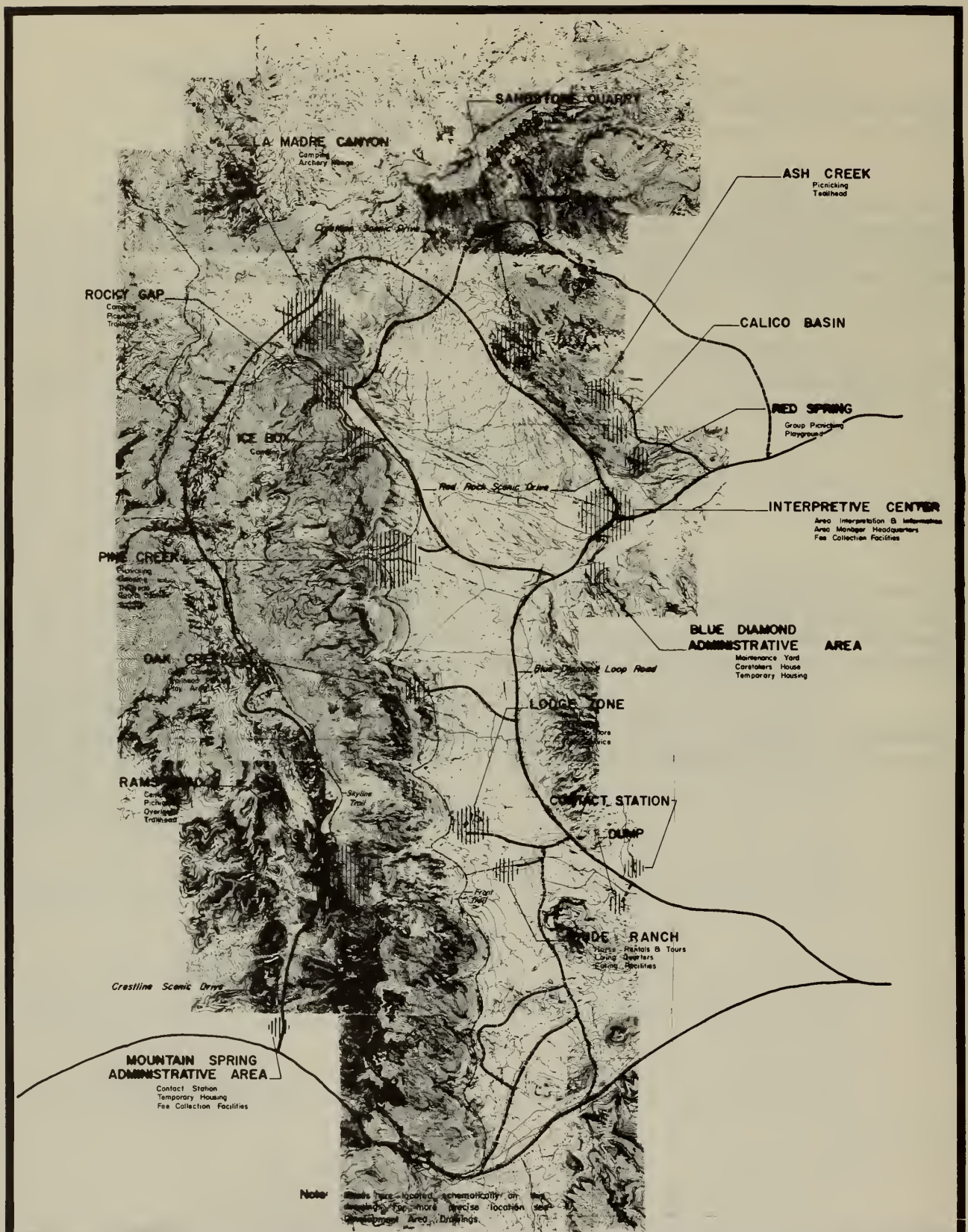
f. Radio System. Permanent radio receiving and transmitting equipment will be installed at the Interpretive Center and the Mountain Spring Administrative Site. All permanent staff vehicles will be equipped with radio equipment. Emergency portable radio equipment will be on hand at the Interpretive Center and Mountain Spring Administrative Area. The radio system will operate in the District net.

g. Power System. Power service will be supplied to the following locations:

Interpretive Center
Blue Diamond Administrative Area
Mountain Spring Administrative Area
Lodge Area
Dude Ranch

Power for the Interpretive Center and the Blue Diamond Administrative Area will be brought in from a source near Red Springs. The existing aerial lines which service the Lodge Area and the Dude Ranch will be placed underground. The aerial lines which service the Mountain Spring Administrative Site will remain in place.

Power will be needed to pump water at most of the recreation development sites. In most of these cases, an L.P. gas-powered generator will be the preferred source of electrical power.



LEGEND

- Primary Road System
- Secondary Road System
- Jeep Trail
- Primary Hiking Trails
- Development Areas

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

GENERAL DEVELOPMENT DRAWING

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED	
NAME	DATE

RECOMMENDED _____ DISTRICT MANAGER

APPROVED _____ STATE DIRECTOR

APPROVED _____ NEVADA STATE PARK ADMINISTRATOR

SCALE 1/2 0 1 2 3 Mi.

DATE

SHEET 4 OF 6

DRAWING NO.

Section E DEVELOPMENT AREA PLAN

Hiking is one of the major activities in the Red Rocks area

Picture window natural arch is a favorite hiking objective

DEVELOPMENT AREAS NARRATIVE

CONTENTS

DEVELOPMENT AREAS NARRATIVE

1. Red Springs

a. Facilities
- 2 group picnic units (150 people/unit)
- Sanitary facilities
- 80 parking spaces
- Softball field
- Volley ball court
- 2 group fire circles

b. Water
- Primary source - Well
- 1st alternate source - Red Spring
- 2nd alternate source - Ash Creek
- Water needs - 3,000 gal/day (flush toilets)
- " " 900 " (vault toilets)

c. General Comments. If adequate water can be obtained, serious consideration should be given to sprinkling the grass in the large, flat area and embarking on a tree-planting program with accompanying underground irrigation system. The facilities will be handled on a reservation basis.

d. Justification. There is a demonstrated need for additional group facilities in the southern Nevada area. For example, the group areas in the adjacent National Forest are booked up for as much as two years in advance. The Red Spring site has the physical amenities necessary for a group site, which includes adequate tree cover and a large, level area for active sports. The area is isolated from other recreation use areas. Large groups create much noise and disturbance, which is not compatible with family camping and picnicking.

2. Calico Springs (Girl Scout Organization Camp)

a. Facilities
- Sanitary facilities
- Active play area

b. Water
- Primary source - well
- 1st alternate source - Calico Spring
- 2nd alternate source - Ash Creek
- Water needs - 2,000 gal/day (flush toilet)

c. General Comments. This development will be operated as a day camp operation. Overnight facilities will not be constructed.

d. Justification. The site is presently owned by the Girl Scouts. This type use is considered compatible with the other recreation uses in the area.

3. Ash Creek

a. Facilities — 70 family picnic units
Trailhead (10 parking spaces)
Sanitary facilities

b. Water — Primary source - Well
1st alternate source - Ash Creek
Water needs - 2,800 gal/day (flush toilet)
1,000 " (vault toilet)

c. General Comments. The picnic unit arrangement should have a good mixture of single family units and multi-family units (space for three or four families together).

d. Justification. This site is in a secluded location which offers an excellent opportunity for family picnicking. There are excellent opportunities for hiking, sightseeing, and nature trails in the immediate vicinity. During most of the year there is live water in Ash Creek. There is excellent overhead cover. The area is shaded by the adjacent hill early in the afternoon.

4. Sandstone Quarry

a. Facilities — 190 family picnic units
Wayside exhibit
Trailhead (20 parking spaces)
Sanitary facilities

b. Water — Primary source - well
1st alternate source - haul water in
2nd alternate source - dry picnic area
Water needs - 7,600 gal/day (flush toilets)
3,000 " (vault toilets)

c. General Comments. It will most likely be necessary to provide artificial shade facilities in this area. Except for the primary "trunk" trail, there should be little trail development in the immediate area. Visitors should be encouraged to roam and explore without use of trails.

d. Justification. There are several sites suitable for intensive development within this area. There are excellent opportunities for hiking, sightseeing, and nature walks. There are several archeological sites in the area which will be protected and interpreted for visitor enjoyment.

5. White Rock

a. Facilities — Overlook (25 parking spaces)
Photo information facilities
Interpretive exhibit
10 family picnic units
Sanitary facilities

b. Water — Primary source - White Rock Spring
Alternate - no water provided
Water needs - 150 gal/day (vault toilet)

c. General Comments. It is anticipated that this site will contain one central parking area with the above facilities spread around it.

d. Justification. This is the best point in the Red Rocks to photograph the escarpment. There are mescal pits and other archeological remains in the immediate area. There are excellent spots for picnic units among the large boulders and pinyon trees. It is an excellent location for interpreting the black brush plant community.

6. Willow Springs

a. Facilities — 110 family camp units
Trailhead (20 parking spaces)
Interpretive exhibit

b. Water — Primary source - existing well
Secondary source - Willow Springs
Alternate source - Lost Creek Spring
Water needs - 11,000 gal/day (flush toilets)
4,400 " (vault toilets)

c. General Comments. The present road which passes through this site will be abandoned when the Crestline Drive is completed, but this may be several years. The site should be designed under the assumption that the through road will be abandoned, but provisions must be made for interim through traffic use. Providing water is available, a tree planting with accompanying underground irrigation system should be installed in this area. The existing 20-family picnic units can easily be converted to camp units. Picnicking should be encouraged in this area until it is evident that it is not compatible with camping.

d. Justification. The terrain is favorable for campground development. There are excellent opportunities for hiking, sightseeing, nature walks, etc. There are several archeological sites within the area. There is a known water supply.

7. Lost Creek

a. Facilities — 50 family picnic units
Sanitary facilities

b. Water — Primary source - Lost Creek Spring
1st alternate source - Willow Spring well
2nd alternate source - Willow Spring
Water needs - 2,000 gal/day (flush toilet)
750 " (vault toilet)

c. General Comments. This site will be the walk-in type. Parking facilities will be provided on the Willow Springs side of the wash. A primitive service road will be provided across the wash for maintenance and garbage collection purposes. This road will be chained off to prevent public use. Every effort should be made to preserve the existing vegetation including release of adequate water from the spring development to maintain the streamside vegetation.

d. Justification. The site has excellent overhead cover. The site is nestled against the north slope of a high escarpment which provides early afternoon shade. There are excellent opportunities for hiking, sightseeing, and nature walks. There is a known source of water.

8. Ice Box

a. Facilities — 60 family camping units
Sanitary facilities

b. Water — Primary source - well
Alternate source - Lost Creek Spring
Water needs - 6,000 gal/day (flush toilet)
2,400 " (vault toilet)

c. General Comments. Ice Box Canyon derived its name from the coolness of the canyon. The development site extends up the canyon and will benefit from the cool downdrafts which pass through the canyon. This is one of the choice development sites.

d. Justification. The site is in the mouth of a narrow canyon which provides early afternoon shade. There is dense vegetative cover; not high enough for overhead cover but will provide excellent buffers between units. The terrain is suitable for camp development. There are excellent opportunities for hiking, sightseeing, and nature walks.

9. Pine Creek

a. Facilities — 200 family picnic units
Trailhead (20 parking stalls)
Guard station

b. Water — Primary source - well
1st alternate - Pine Creek
Water needs (picnic) -
8,000 gal/day (flush toilets)
3,000 " (vault toilets)

c. General Comments. The initial development should include only the picnic area. The reason for encouraging picnic use rather than camping is to decrease the length of stay in the area and, therefore, decrease the intensity of patrolling which will have to be done to keep visitors out of the Natural Area. Serious thought should be given to controlling the hours of use in this area.

d. Justification. This site has outstanding overhead cover. There is live water in Pine Creek the year around. The site is near a high escarpment which offers early afternoon shade. There are excellent hiking, sightseeing, and nature walk opportunities up Pine Creek Canyon.

10. Oak Creek

a. Facilities — 8 group camping units (25 people/unit)
Trailhead (20 parking spaces)

b. Water — Primary source - well
Alternate source - haul water in
Water needs - 5,000 gal/day (flush toilet)
2,000 " (vault toilet)

c. General Comments. This site will be administered on a reservation basis. The area listed for expansion on Development Area No. 1 will not be constructed during the initial development.

d. Justification. The topography is suitable for camp development. The pinyon-juniper offers good overhead cover. There are excellent opportunities for hiking, sightseeing, and nature walks in nearby Oak Creek Canyon. The area is isolated from family use areas. There is adequate level area to develop play fields and similar facilities.

11. Interpretive Center

a. Facilities — Building to house:

- Peak hour visitor load of 500 people
- Office space for 8 employees
- Storage space for office supplies and interpretive materials
- Flush toilet facilities
- Contact station - fee collection and off-duty information distribution
- 120 parking spaces
- 75 seat amphitheater
- Roadside water distribution point

b. Water

Primary source - well
Alternate source - Lost Creek spring
Water needs - 15,000 gal/day

c. General Comments. The primary purpose of the visitor center is to introduce the visitor to the area. All the information and interpretive facilities will be oriented toward "whetting the appetite" of the visitor and encouraging him to personally visit the recreation attractions in the area.

d. Justification. The visitor study indicates that the vast majority of the visitors will enter the Red Rocks via Charleston Avenue. This site will offer an excellent location to intercept the visitor before he gets sidetracked. This site offers an excellent view of the main escarpment and of the Calico Hills. Having the visitor center on the major entrance road will provide for more efficient use of staff personnel in collection of fees, controlling visitor use (particularly target shooting) and in providing better service to the visitor. The site is near sources of electrical power and telephone service. The site is adjacent to the area selected by U.S.G.S. hydrologists as the most likely place in the Red Rock area to locate underground water.

12. Blue Diamond Administrative Area

a. Facilities

- 1 residence (3-bedroom)
- 1 apartment building (4-unit)
- Maintenance and repair shop
- General storage - off-season storage of recreation facilities
- Vehicle storage
- Office space for four employees

b. Water

Primary source - well (same as Interpretive Center)
Alternate source - Lost Creek spring

c. General Comments. The residence should be constructed so that it is clearly visible from the Blue Diamond Loop Road. The design of the structure should be neat and harmonious with the surrounding environment. The purpose of having the residence in view is twofold: first, it will provide a place for visitors to go for emergency needs during off hours when the Interpretive Center is closed; secondly, it may discourage vandalism if people know there is someone present in the area at all times. The remaining facilities should be well camouflaged.

d. Justification. The site is near the highway but yet most of the facilities can be screened from view of the highway by natural barriers. It is near the Interpretive Center, where most of the staff will be housed. It is close to the important utility systems--water, power, and telephone. Its proximity to the major visitor entrance provides an excellent location for providing emergency services.

13. Dude Ranch

a. Facilities — Staff living quarters
Barn, corral, and associated facilities
Sanitary facilities
Rustic restaurant and lobby facilities

b. Water — Primary source - well
Secondary source - spring water
Water needs - 3,500 gal/day

c. General Comments. This will be a day use operation--no overnight facilities for guests. The design of all structures will be reviewed and approved by the area administrator prior to construction.

d. Justification. This site is near the major trunk trail system which provides access to all the canyons along the escarpment and also provides access to the top of the escarpment. The site is near the Blue Diamond Loop road, which is a major traffic artery. The visitor study indicates a large demand for this type service.

14. Rams-Head

a. Facilities
100 family picnic units
100 family camp units
Trailhead (40 parking spaces)
Corral, with loading chute
Sanitary facilities
Overlook (60 parking spaces)
Viewpoint (10 parking spaces)

b. Water
Primary source - pipe water from Mountain Springs
1st alternate source - haul water in
2nd alternate source - water catchment basins
3rd alternate - have visitors pick up water at Mountain Springs

Water needs (picnic) -	4,000	gal/day	(flush toilets)
	1,500	"	(vault toilets)
Water needs (camp)	10,000	"	(flush toilets)
	4,000	"	(vault toilets)

c. General Comments. None

d. Justification. This site is higher than the sites in the valley by more than 2,000 feet. Summer temperatures range from 6° to 10° cooler than at the valley floor. The view down Sandstone Canyon and out over the Las Vegas valley is sensational. Numerous dramatic overlooks are within a short, easy hike from this site. The tree cover is excellent. The intensive use areas are far enough from the steep cliffs area to provide safety for children yet close enough for easy hiking.

15. Mountain Springs Administrative Area

a. Facilities
Apartment building (2 units)
Fee collection station and control point
Water distribution point
Information facilities
Equipment storage facilities

b. Water
Primary source - well
Alternate source - Mountain Springs

c. General Comments. None

d. Justification. This is an ideal location to exercise visitor control and provide assistance to the visitor. The site is adjacent to the small town of Mountain Spring, where basic community services are available for the staff people living at this location. It is essential to have staff and emergency facilities available in the higher elevations. Utilities such as power, telephone, and water are readily available.

16. La Madre Canyon

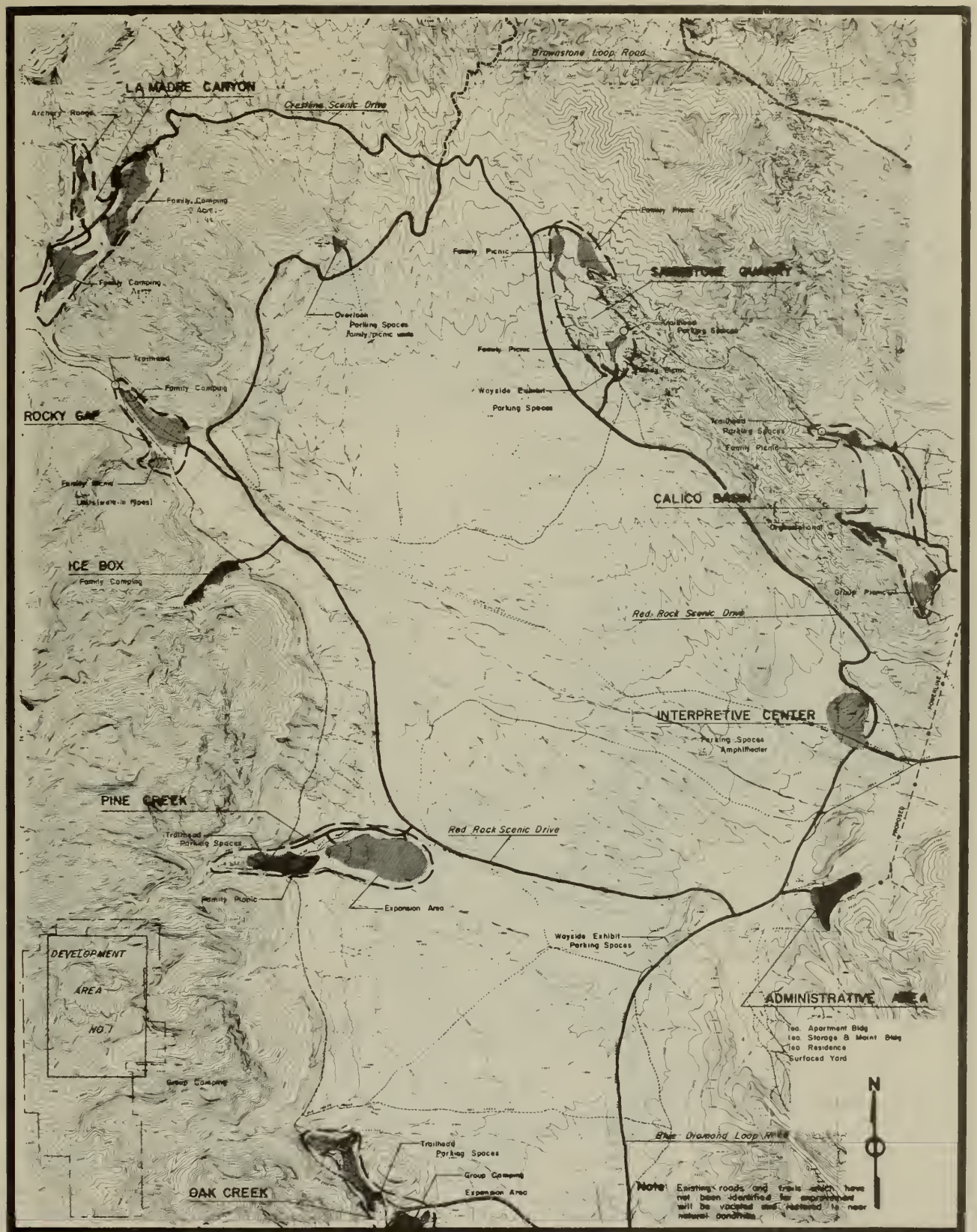
a. Facilities — 230 family camping units
An archery range
Sanitary facilities

b. Water — Primary source - well
Secondary source - La Madre spring
Water needs - 23,000 gal/day (flush toilets)
9,000 " (vault units)

c. General Comments. This is one of the finest campground areas in the Red Rock area.

d. Justification. The site has excellent overhead cover. The terrain is suitable for intensive recreation development. There is a known water supply. There is an excellent opportunity for hiking and sightseeing in the area.

17. Lodge Area. This area has definite potential for a motel-resort type operation, providing the development and management is properly controlled. The exact development which will go into this area has not definitely been determined. The development listed on the Development Area #2 drawing suggests a certain development trend, but a separate study should be undertaken to determine the exact development scheme.



LEGEND

- Primary Road System
- Secondary Road System
- Jeep Trails
- Primary Hiking Trails
- Development Area Boundary
- Intensive Use Area

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

DEVELOPMENT AREA NO. 1

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED	
NAME	DATE

RECOMMENDED _____ DISTRICT MANAGER

APPROVED _____ STATE DIRECTOR

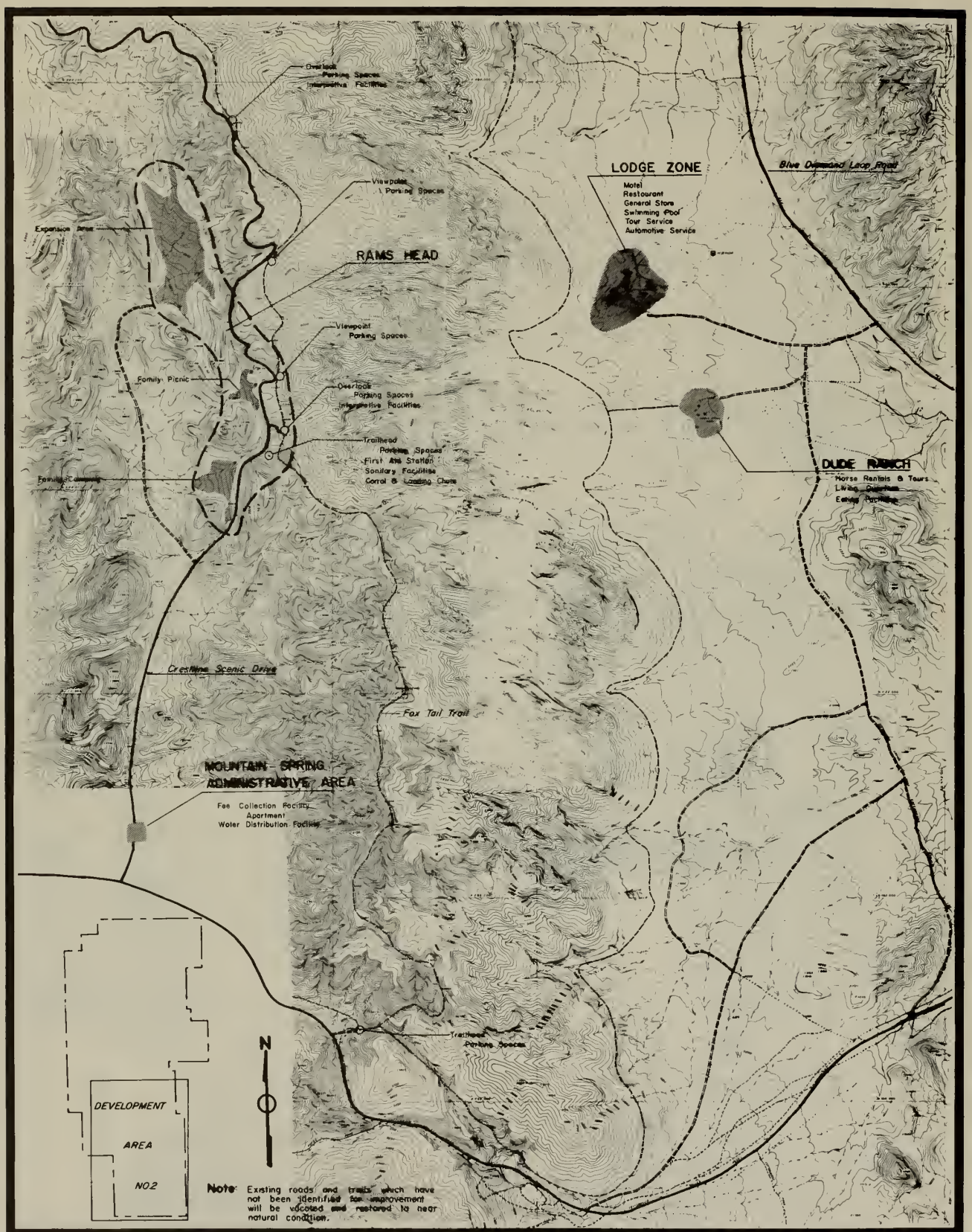
APPROVED _____ NEVADA STATE PARK ADMINISTRATOR

SCALE 2000 1000 0 2000 4000 6000 FT

DATE

SHEET 5 OF 6

DRAWING NO



LEGEND

- Primary Road System
- Secondary Road System
- Jeep Trails
- Primary Hiking Trails
- Development Area Boundary
- Intensive Use Area

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
IN COOPERATION WITH
NEVADA STATE PARK

DEVELOPMENT AREA NO. 2

Part of Recreation Management Plan

RED ROCKS CANYON RECREATION LANDS

UPDATED	
NAME	DATE

RECOMMENDED _____ DISTRICT MANAGER

APPROVED _____ STATE DIRECTOR

APPROVED _____ NEVADA STATE PARK ADMINISTRATOR

SCALE 2000 1000 0 2000 4000 6000FT.

DATE

SHEET 6 OF 6

DRAWING NO

Section F BASIC INFORMATION

The grotesque forms of the desert environment offers a stimulating challenge to the photographers.

BASIC INFORMATION

BASIC INFORMATION

Introduction

The purpose of the basic information section is to bring together the basic data which are necessary to guide the development of the Recreation Management Plan. Not all the basic data that are used to develop the plan are included in this section--only the data which are considered necessary as "back-up" material for the plan.

Refer to the documents listed under item 6, Bibliography, for more detailed information on specific subjects covered in this section, page 20-F.

Physical Profile

1. Terrain. See the base maps for topographic features.

2. Vegetation. The general vegetative types are depicted on the "Vegetation Type" overlay. Vegetation on the lower slopes is typical of the Upper Sonoran Zone. Principal species occurring in this portion of the area are: Joshua trees, creosote bush, agave, yucca, cholla, beavertail and pricklypear cactus, black brush, and white bursage. Within the deep canyon bottoms of the Red Rock escarpment are such un-desert-like species as Angelica, ponderosa pine, clubmosses, ferns, single-leaf ash, Turbinella oak, hackberry, and redbud.

Vegetation on the sandstone slopes is very sparse and consists mostly of small groves of ponderosa pine and occasional pinyon or juniper. The upper slopes, which are above and west of the trace line of the Keystone thrust fault, have a rather dense coverage of pinyon pine, juniper, big sage, Gambel oak, cliffrose, Apache plume, Yerba Santa, mountain mahogany, and manzanita.

The north fork of Pine Creek Canyon possesses the most distinctive plant community in the area. This area contains some 10 to 15 endemic plant species which occur in other localities of the Spring Mountain Range only. It is also a refugium for at least two kinds of ferns that occur nowhere else in the state of Nevada, and marks the place of the lowest elevation for ponderosa pine in the Spring Mountain Range.

3. Geologic Features (See the Geologic Features overlay) The major recreation attraction in the area is the Red Rocks escarpment. Other areas of major importance are the colorful sandstone formations in the Calico Hill and Brownstone areas.

An important individual feature is the Keystone thrust which is exposed above the Aztec sandstone for the entire length of the escarpment. The Keystone thrust, dipping moderately westward, is nearly parallel to the beds above and below it. But just south of the prominent bend in strike of the thrust, a deep valley (Red Rock Canyon) reveals that the thrust, steepening downward, transects the Aztec and the underlying beds of the chink, which below the contact with the thrust plate are upturned past the vertical (Longwell 1965).

Picture Window Natural Arch is another geologic feature of great importance in the Red Rock area.

4. Wildlife. There is no comprehensive inventory of the animal life in the Red Rocks area. However, a study recently completed by the Biology Staff of Nevada Southern University, on the "Natural History of Pine Creek Canyon," provides a good insight into the biotic community of the area. Fish life is non-existent.

The biotic community is fairly representative of that found in the southern Nevada area. The exceptions are those animals which range in the fir-pine, bristlecone pine, and the pseudo-alpine communities. Birdlife which is dependent on large, open bodies of water is also absent in this area. A recent study of the southern Nevada area (Bradley and Deacon, 1965) indicates that there are approximately 120 species of amphibians, reptiles, and mammals, and approximately 290 species of birds. Most of these species are found in the Red Rock area.

The Spring Mountain Range, of which Red Rocks is a part, is isolated by intervening deserts. Isolation has resulted in speciation which has produced one endemic chipmunk (Eutamias palmeri), a few endemic subspecies of other mammals, and several endemic plant species (Bradley and Deacon 1965). These unique species present an excellent opportunity for interpretive programs.

There are several game species in the Red Rocks area, including desert bighorn sheep, elk, deer, rabbits, and quail. The area is considered an important desert bighorn sheep range. Bighorn are observed often in the Red Rocks area. The bighorn population in the Spring Mountain Range is from 75 to 100 head. Deer are present in the area but are much more abundant in the higher elevations of the Spring Mountains. Elk occasionally migrate into the area but in very small numbers. The valley area has good populations of Gambel's quail and cottontails wherever water is found.

Typical of most desert environments, the greatest wildlife activity is during the night hours. The greatest variety of wildlife species is present near permanent water supplies. Opportunities for observation of the desert wildlife are, consequently, greatest during the nighttime near water sources.

Some of the wildlife species which have special recreation values are listed below:

Amphibians and Reptiles

Desert Toad
Pacific Tree Frog
Leopard Lizard
Western Whiptail Lizard
Gilbert's Skink
Yucca Night Lizard

Mammals

Bats - five species
Cottontail Rabbit
Panamint Chipmunk
Antelope Ground Squirrel
Rock Squirrel
Mice - several species
Kangaroo Rat
Badger
Desert Wood Rat
Ring Tail Cat
Coyote
Bobcat
Mountain Lion
Mule Deer
Desert Bighorn Sheep
Elk

Birds

Turkey Vulture
Golden Eagle
Gambel's Quail
Mourning Dove
Roadrunner
Ruby Crowned Kinglet
Long-eared Owl
Ladderback Woodpecker
Common Raven
Western Bluebird
Phainopepla
Audubon's Warbler
Bullock's Oriole
Indigo Bunting
Rufous-sided Towhee
Oregon Junco

5. Cultural Features. Man has occupied the region for at least 10,000 years, and perhaps longer. Gypsum Cave, near Las Vegas, has provided evidence of a big game-hunting culture at about 9,000 B.C. Other hunting and gathering peoples, represented by Pinto Basin points, were in the region in pre-Christian times. Although these peoples have not been specifically identified in the Red Rock area there is good indication that they were there. A complete inventory of the area is needed.

At about the time of Christ a hunting-gathering type culture was prevalent in the region. These people were related to the general Basket Maker culture spread over much of the Southwest at this period. The culture received maize, beans, and squash in time and settled down to a sedentary way of life until they dispersed in the late 1100's. This group was centered on the lower Virgin and Muddy Rivers, living at first in pit houses and later in Pueblo style surface dwellings. Although basically farmers, these people also hunted game and gathered mescal (agave) far and wide. One of their use areas was the Red Rock area, as indicated by pottery, mescal pits, camp sites, and possibly pithouses.

Sometime after 700 A.D. the Southern Paiute entered the area. They were distantly related to the people carrying the Pueblo culture of the Virgin and Muddy River, as some aspects of their life-ways were quite similar. They also traded among themselves.

The Paiutes were a gathering people doing some hunting, and some groups practicing an insipid agriculture. They used some of the same mescal pits, camp sites, and areas as did the Pueblos. They also used windbreaks of brush and caves of semi-permanent dwellings, and during the winter gathered at specific village locations for social and religious rites. The Paiutes were in the area at contact and remain on reservations nearby today.

There are indications, through pottery mainly, of contacts in prehistoric times by both the Pueblos and the Paiutes with people to the south, peoples ancestral to the present-day Mohave, Yuma, Walapai, and others. In historic times we have accounts of Mohave raids into the area for plunder and slaves.

In historic times the Spanish, Mexicans, Mountain Men, and Mormon Pioneers all passed through the region via the trail over Spring Mountain Pass. They left little evidence of passing, however. Only the cattlemen settled in the valley below the escarpment and even they have passed from pioneer rancher to businessman types.

The archeological resources have been well inventoried in the northern end of the Red Rocks, especially Brownstone Canyon, Sandstone Quarry, Lost Creek, Willow Spring, Calico Spring, and Ice Box Canyon. We can expect sites wherever there is water in the rest of the unsurveyed area. Southern Nevada University is proceeding with a complete survey of the proposed recreation area.

6. Water Resources. This area is bisected by the Red Rock escarpment which divides the area into two main drainages. To the west the water drains into the Pahrump Valley, and to the east it drains into the Las Vegas Valley.

The Red Rock area is devoid of lakes, rivers, or large streams. Seasonal ponds or potholes occur in the high sandstone bluffs area. Springs and seeps occur throughout the area. See the table below.

Surface Water Within
Red Rock Canyon Recreation Lands

Name	G.P.M.	Date Measured	Apparent Ownership
Calico Spring	2	Oct.1965	Spring Mountain Ranch
Red Spring	3	Oct.1965	" " "
Ash Creek	10	12/13/65	" " "
White Rock Spring	1½	Oct.1965	" " "
Willow Spring	4	Oct.1965	" " "
Lost Creek Spring	10	Oct.1965	Public Water Reserve
La Madre Spring	?		Unknown
Switchback Spring	Dry	Oct.1965	Spring Mountain Ranch
Lonepine Spring	Dry	Oct.1965	" " "
Ice Box Canyon Spring	2	12/13/65	Unknown
Pine Creek	50	12/13/65	"
Oak Creek Spring	12	12/13/65	Spring Mountain Ranch
Mud Spring #1 and #2	3	Oct.1965	" " "

Other springs not measured: Sandstone Spring, Mormon Green Springs, Wheeler Camp Spring, Cottonwood Spring, Bootleg Spring, Rainbow Spring, Mountain Springs.

Preliminary studies by U. S. Geological Survey indicate that there is an adequate supply of underground water available to support recreation needs. A rather intensive testing program is needed to confirm the availability of underground water.

Except for Lost Creek Spring, all of the usable surface water appears to be appropriated. The legal ownership of the water is a problem not peculiar to Red Rocks but the same problem exists throughout the state: i.e. Does the water belong to the state or the Federal government? Has the apparent owner proved beneficial use, etc.? To complicate the matter, grazing privileges are established on a water base.

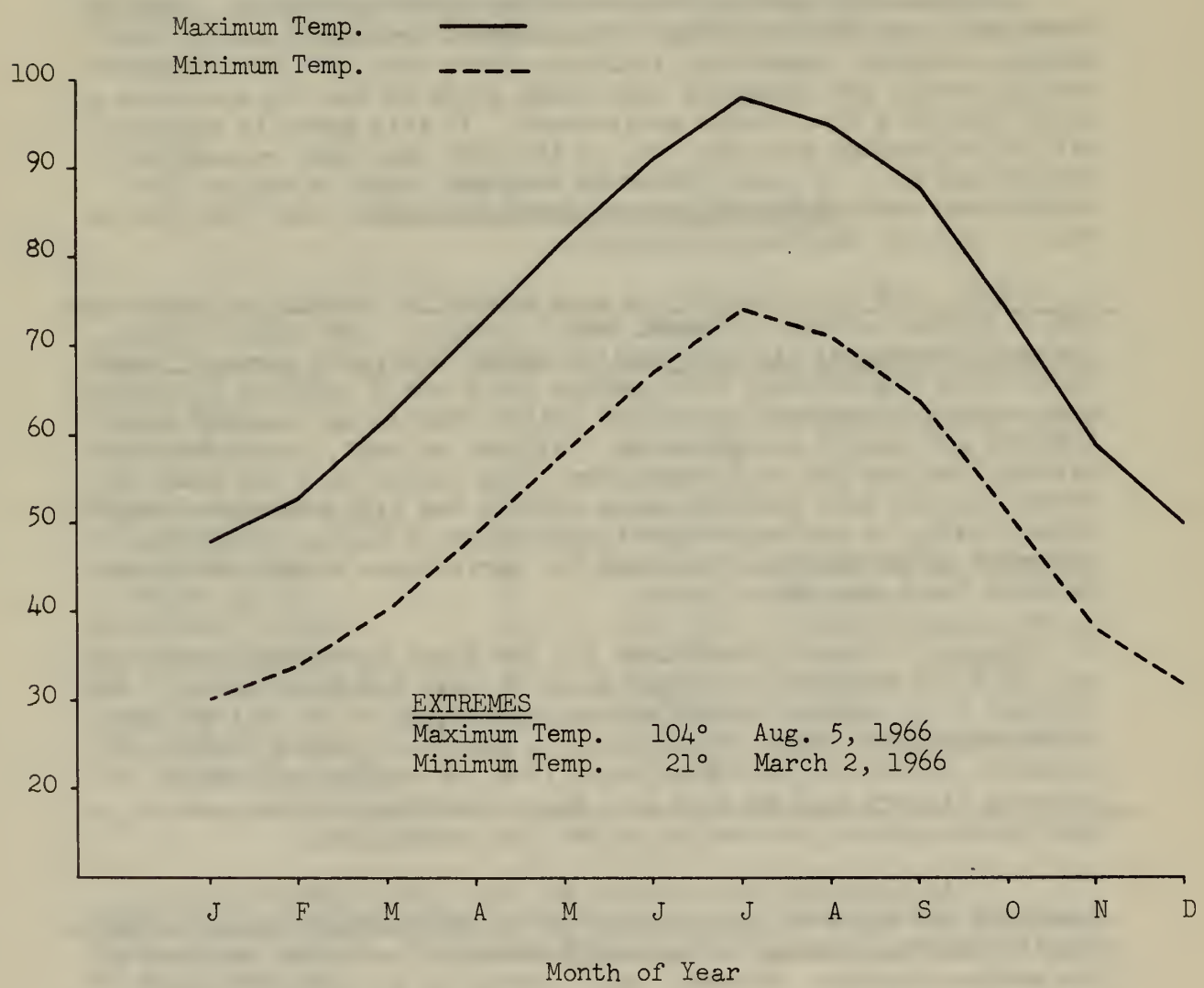
Even if legality of the surface water were not in question, there would be problems. The surface water forms the basis for a unique ecological community, including ferns that are found nowhere else in Nevada and ponderosa pine which grows at the low elevation of 4,000 feet in a hot, desert environment. If this water is siphoned off for recreation purposes, one of the very important recreation attractions will be gone. There is an urgent need to explore the underground water potential of the Red Rock area so that this source can be used for recreation purposes.

7. Soils. The soils within the area generally contain the characteristics typical of the southwest desert terrain: Low organic matter, low soil nutrients, high pH, shallow depth, and rapid permeability. These soils are not well developed as the A and B horizons associated with soils in other regions of the United States, and usually these horizons are barely recognizable. Caliche, or marl, occurs in the valleys limiting the soil depth from a few inches to a few feet. Generally, all soil found in these valleys has high concentrations of soluble salts or carbonates and bicarbonates of sodium. The only occurrence of soils being reclaimed for agriculture is at the Spring Mountain Ranch near Blue Diamond.

8. Climate. Climatic conditions for the lower elevations of the Red Rock area are measured at Calico Basin (Little Red Rock Canyon). The official U. S. Weather Bureau station was installed at that location in February 1965. Since three years is much too short a period to establish normals for the area, data from the weather station at McCarran Airport will be used as a basis for interpolation and in some cases a direct indication of Red Rock conditions.

An elevation differential of over 3,000' between Calico Basin and the higher elevations of the Red Rock area produces climatic conditions which appear to vary significantly from those measured at the weather station. However, most conditions are not officially measured at the higher location. Since the variations will have a profound effect on the attractiveness of Red Rocks, it will be necessary to substitute estimates for the missing data.

a. Temperature. In the lower Red Rock area, daily maximum temperatures average 73° for the year with daily minimum temperatures averaging 51° annually. Compared to Las Vegas temperatures, these figures are, respectively, 6° and 2° lower. As to the higher elevations, maximum temperatures are estimated at some 12° lower than the Calico Basin readings, with minimums approximately 4° lower. (Residents of Mountain Spring, which is on top of the escarpment, claim a 12° difference.) The day/night temperature difference for the year averages 22° at lower elevations.



b. Precipitation. Rainfall in the Las Vegas Valley averages 3.9 inches annually and occurs at a normal rate of less than 1/2 inch per month. The extremes of the normal range are a low of .04 inches in June and a high of .53 inches in January.

Snow rarely falls at lower elevations, and even on the rare occasions it usually melts as it falls or shortly thereafter. The one exception occurred in January 1949, when 16.7 inches fell during the month. The maximum snow depth at that time was 7 inches. Normal snowfall averages 1.1 inches in January, 0.3 inches in November, and only traces in October, December, and February-April. At the higher elevations, snowfalls are somewhat heavier and remain longer on the ground.

c. Wind. The prevailing direction of normal winds in the valley is from the southwest. The mean velocity is approximately 9 miles per hour, with the highest speeds occurring during May and June. Strong winds, which are usually associated with major storms, arrive either from the southwest or northwest. Speeds of over 50 m.p.h. are infrequent, the highest being a 54 m.p.h. reading in February 1965.

d. Special Conditions. There is a period of about two weeks almost every summer when thunderstorms prevail and abnormal amounts of rainfall occur. On occasion these storms have developed into cloudburst proportions and resulted in extremely dangerous flash-floods. Within the span of recorded data at Calico Basin, a maximum 24-hour total of 3.50 inches occurred in December 1966.

Social-Economic Profile

1. Transportation Systems. Five major highways converge at Las Vegas, the focal point of Clark County. One of these is Interstate 15, which will eventually provide continuous, 4-lane driving from Las Vegas to other major Western population centers such as Salt Lake City and Los Angeles. At present some 290 miles have been completed between southern California and southern Nevada. Additional modes of transportation are eight major airlines, several bus lines, and the Union Pacific Railroad.

Access to and within the Red Rock area is rather limited at present. Charleston Avenue and Blue Diamond Road converge at the east edge of the study area, providing a paved loop road for Las Vegas residents and direct access on and off the Interstate for non-local visitors. All remaining roads are unpaved, with the majority designated as "jeeps only."

2. Population Centers. Red Rock Canyon is located in the western half of Clark County, the largest populated area in Nevada and one of the fastest growing regions in the Nation. Evidence of a phenomenal growth in population is seen in recent census enumerations: (1) From 1940 to 1964, County population as a percentage of State population has increased from 15% to 60%. (2) A 165% population increase occurred during the decade following 1950. (3) Another decade of spectacular growth is indicated by a 100% population increase during the first four years of the 1960's.

According to estimates of Dr. G. N. Rostvold, Professor of Economics at Pomona College (Claremont, California), Clark County population was 255,000 in 1965. His projections are 350,000 by 1970 and 575,000 by 1980.

In 1963 approximately 69% of the County population was distributed in four urban centers: Las Vegas, North Las Vegas, Henderson, and Boulder City. Las Vegas is the largest of the communities and accounts for most of the Clark County growth. However, the other three have shown consistent increases since 1940.

There is little reason to believe that population will level off or decline in the next few decades. Immigration has accounted for 75% of the recent increases and as long as this type of growth is supported by an expanding employment base, Clark County will continue to grow.

3. Industry

The relative importance of various industrial activities in the Clark County economy is illustrated below.

Percentage Distribution of Employment by Industry

Industrial Group	1940	1964
Service	22.3	43.9
Retail, wholesale trade	20.0	17.7
Government	6.7	11.2
Construction	14.1	9.9
Transportation, communications, utilities	16.2	7.4
Manufacturing	3.0	5.0
Finance, insurance, real estate	1.5	4.3
Agriculture and mining	16.2	0.6
	100.0	100.0

Of special importance to future recreation development is the tremendous increase and the clearly predominant position of the service group. Tourist expenditures have been directly responsible for growth in the service activity; and from all indications, tourism will continue to support expansions in accommodations, food, gasoline, and related services.

A very necessary part of the accommodations are outdoor recreation sites. For example, approximately 12% of all out-of-state automobile tourists indicate scenic attractions and outdoor recreation as a primary trip purpose. Although it is a small percentage in comparison to the 30% seeking indoor recreation, it becomes a sizable figure when multiplied by the annual number of motorists (15 million in 1963). Considering the present and projected increases in disposable income, leisure time, and mobility throughout the Nation, it is fairly safe to assume that recreation resources in Nevada will absorb increasing non-local visitor pressures.

4. Recreation. There are three major recreation developments in Clark County, all of which may be viewed as alternative opportunities to the Red Rock area. The most extensively developed and used is Lake Mead National Recreation Area. Second in order of popularity is Mt. Charleston, an area developed and operated by the U. S. Forest Service. The third major area is Valley of Fire State Park.

Although there is obviously some overlap between the recreation opportunities already available and those to be provided at Red Rocks, each area has a unique and definite role in the overall recreation complex. Water activities, available at no other area under consideration, are the unique contributions of Lake Mead. Valley of Fire provides an unusual opportunity for viewing very colorful and delicately eroded sandstone formations. Mt. Charleston draws large summer crowds due, primarily, to high elevation and a coolness that is rare in southern Nevada.

Desert and high elevation areas within a relatively compact management area place Red Rocks in a position of offering yet another unique contribution to regional recreation opportunities. At present there are no developed areas with the same variety of recreational environments. Facilities at high elevation are some 20 - 30 miles northeast of the urban areas, and the developed desert areas are from 25 - 50 miles east and southeast. With improved access and additional development, Red Rocks will provide both desert and high elevation recreation facilities at shorter driving distances and, more important, at the same general destination. Variety is a very definite asset because there will be virtually no undesirable seasons at Red Rocks. In periods of extreme heat, visitors will not be restricted to the desert. If winter conditions isolate the high elevation facilities, visitors will still be able to use the lower developments.

5. Trends. The economy of Las Vegas and vicinity is in an early stage of growth and development. Using a land area holding capacity estimate of 3,000,000 persons and the present population as an index of the stage of growth, the economy of 1964 was at the 8% stage of development. Trends indicate that there is much growth ahead for this area.

Visitor Use

1. Existing Visitor Use Information

a. Number of visitors. Current visitor use estimates for the Red Rock Canyon area are based on State and County traffic counts and on data obtained from visitor interviews. Correction factors for non-recreation and double-counted vehicles, vehicle occupants, and seasonal traffic fluctuations were derived from the two data sources and applied to average daily traffic counts. The estimates of annual visitation are:

Annual average daily recreation vehicles	140
Total annual recreation vehicles	51,100
Total annual recreation visitors	192,000

Contrary to popular beliefs about desert recreation pursuits, vehicular traffic counts indicate that the heaviest visitation period occurs during the three summer months. The current predominance of pleasure driving, which is less affected by extreme heat than other outdoor recreation activities, and the normal summer increase in leisure time are further indications of the summer visitation increase in the Red Rock area.

The study of current visitation patterns also gives evidence of peak daily attendance on Sundays. An estimated 35% of the weekly total occurs on this day. In terms of design load, visitation on a typical Sunday in the prime use season amounted to some 1,550 individuals.

b. Origin of Visitors. Approximately 90% of the visitors to Red Rock Canyon in 1967 were residents of Clark County. The relatively low percentage of non-local visitors is attributed to deficiencies in access, facilities, and advertisement. Following the initial development phases, these percentages will more than likely fall into the present regional pattern of 70% local - 30% non-local.1/

c. Type of Visitors. Local family groups prevail among the visitors to the study area and there is a tendency for two or more families to travel in one vehicle. The degree to which this occurs appears to be abnormally high, probably due to a desire to save wear and tear on family autos. Organizational groups such as the Sierra Club and the Boy Scouts are frequent visitors to the roadless, back-country areas.

Modes of transportation range from the most frequently used sedan to jeeps, pick-up trucks, motorbikes, campers, and horses (in approximately that order of popularity).

1/ See footnotes at end of section.

During the personal interviews on the Red Rock summit road, all vehicle drivers were asked to express their opinions concerning possible future recreational improvements (roads, trails, tables, etc.) in the area. The response to this question was overwhelmingly in favor of all types of improvements (approximately 70% in favor; 30% disapproved in one way or another).

d. Duration of Visits. Observations on length of stay were incorporated in the visitor interviews conducted near the Willow Springs Recreation Site. Although rather limited in scope, they do provide some insight to probable patterns at future developed sites.

Present visits average somewhat less than an hour but they vary anywhere from 5 minutes up to 5 hours or more. Pleasure drivers account for many extremely short visits, while picnickers may stop for as short as 20 minutes or as long as half a day. Other activities were so few in number that any length-of-stay calculations would be almost meaningless.

e. Purpose of Visit. The primary trip purposes, as expressed by vehicle drivers at the time of their entries, were:

Driving for pleasure - sightseeing	53%
Picnicking	24%
Other (hunting-shooting, hiking, camping,etc.)	23%

Participation in secondary activities was not determined.

2. Projected Visitor Use

a. Preliminary Assumptions. Prior to developing visitor use projections, three basic assumptions were made concerning factors that affect outdoor recreation demand and participation rates.

(1) All future facilities will be developed to meet the overall objectives of this recreation management plan. If the recreation resources are not developed to bring out the full potential of Red Rocks, projected visitor use figures that are based on optimum development premises will have little value.

(2) A concerted effort will be made to widely publicize the recreational attractions of Red Rock Canyon.

(3) There will be no immediate, drastic changes in present relationships between demand "shifters" (income, mobility, etc.) and outdoor recreation participation.

The reason for qualifying the projections at this time is simply to point out that unrealized expectations or altered socio-economic trends could easily invalidate the most carefully constructed procedures.

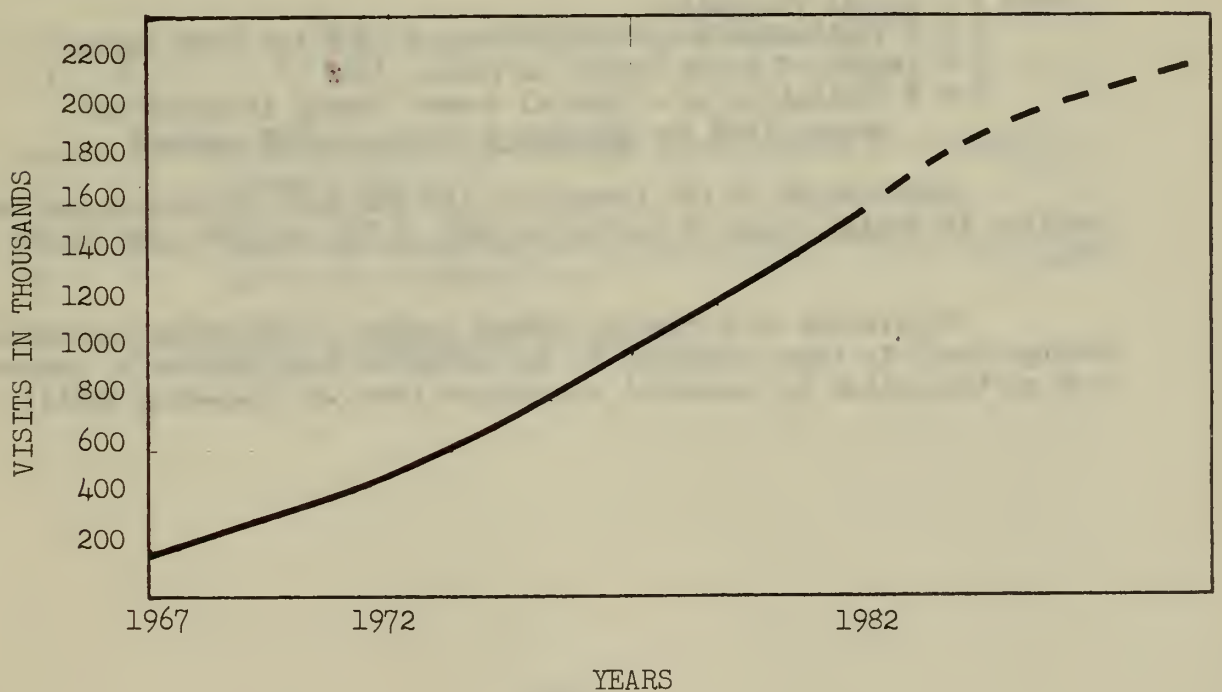
b. Factors Used in Projections. The most important factors affecting statewide demand for recreation facilities are population, leisure time, mobility, personal income, and tourism. With the exception of population, these demand shifters were analyzed for the state as a whole and then converted to regional trend "indicators." The following table lists the indicators that were developed for the Southern Desert and Mountain (SD&M) region.2/

Socio-economic factors affecting outdoor recreation demand in Nevada

Factor	Indicator (1965-1970)	Indicator (1965-1980)
Population	1.56	2.35
Leisure time	1.03	1.10
Income	1.16	1.40
Mobility	1.08	1.34
Local attendance (P x LT x I x M)	2.01	4.84

Non-local attendance indicators were replaced in the present projections by assumptions which will be explained later.

c. Projected Annual Recreation Visitation. See the following chart.



The projection components in the "Nevada" technique are: (1) current annual visitor estimate; (2) present and projected local/non-local attendance percentages; and (3) the local attendance indicators. The application of these components is illustrated in the table below.

Application of Projection Components

	1967 %	1967 Visits	1967-1972 Indicator	1972 Visits	1967-1982 Indicator	1982 Visits
Local	90	172,800	2.01	347,300	4.84	836,400
Non-local	10	19,200	- 3/	148,800	- 4/	800,000
Total		192,000		496,100		1,636,400

d. Projected Facility Requirements. The first step in determining facility needs for projected visitation involves the computation of design loads. The formula 5/ and symbol meanings in the computation are:

$$\frac{A \times B}{C} \times D = \text{Design Load}$$

where A = annual visitation
B = % visitation in prime use season (60% for SD&M region)
C = length of prime season in weeks (26 " " ")
D = % visitation on a typical summer Sunday in prime use season (50% for developed areas in SD&M region)

Application of the formula to the Red Rock visitation estimates resulted in design loads of 1,550 for 1967, 5,700 in 1972, and 18,900 in 1982.

Visitation on a typical summer Sunday in the prime use season (design load) is then converted to the probable distribution of recreation participation by potential activities (see the following table).

Anticipated Activity Participation Rates
on a Typical Summer Sunday

Activity	Participation Percentages[6]	1967[7]	1972	1982[8]
(Design Load)		1,550	5,700	18,900
Sightseeing	64	--	3,600	12,100
Pleasure driving	59	--	3,360	11,200
Picnicking	58	--	3,300	11,000
Camping	21	--	1,200	4,000
Nature walks	16	--	900	3,000
Horseback riding	15	--	850	2,800
Hiking	10	--	570	1,900

The final step in the procedure involves a computation formula of the general form:

$$\frac{A \times B}{C} = \text{Facility Requirements}$$

where A = estimated number of activity participants on a typical summer Sunday

B = % peak hour activity participation is of total Sunday activity participation

C = persons accommodated by one unit.

The actual computations are illustrated in the two following tables.

Facility Requirements for Selected Activities
During a Typical Peak Activity Hour in 1972

Activity	A	B	C	Facilities Needed
Picnicking	3,300	.25	4 persons per table	200 tables
Camping	1,200	.75	4 persons per unit	225 units
Nature walks	900	.25	50 persons per mile	4.5 miles
Horseback riding	850	.50	20 horses per mile	20.0 miles
Hiking	570	.75	40 persons per mile	10.0 miles

Facility Requirements for Selected Activities
During a Typical Peak Activity Hour in 1982

Activity	A	B	C	Facilities Needed
Picnicking	11,000	.25	4 persons per table	700 tables
Camping	4,000	.75	4 persons per unit	750 units
Nature walks	3,000	.25	50 persons per mile	15 miles
Horseback riding	2,800	.50	20 horses per mile	70 miles
Hiking	1,900	.75	40 persons per mile	35 miles

FOOTNOTES

1/ Composite of origin data from Valley of Fire State Park, Toiyabe National Forest and Lake Mead N.R.A. (excluding Lake Mohave).

2/ Actual computations are illustrated in Recreation in Nevada, Part II. In very brief terms, each indicator represents a percentage increase for the four socio-economic factors within the designated time periods. Population is represented by estimates and projections for the region (not Clark County); mobility by miles per capita traveled for recreational and social use per year; income by personal per capita rates; and leisure time by average annual hours available for leisure.

3/ Assume present regional pattern - 70% local, 30% non-local.

4/ Assumption adopted from State plan - 50% local, 50% non-local.

5/ Recreation in Nevada, Part II.

6/ National participation rates converted to regional rates, ORRRC Study Report #19.

7/ Percentages inapplicable due to present opportunity deficiencies.

8/ Participation rates do not reflect possible future changes in percentages.

9/ Outdoor Recreation Space Standards.

Multiple Use Considerations

This section deals with the compatibility of recreation with other resource use. Problems or conflicts which exist or could exist are identified so that full consideration can be given during the preparation of the plan.

Refer to the Spring Mountain URA for detailed information on each specific activity.

1. Domestic Livestock Grazing. Livestock and the recreation user have been getting along well over the years, with one notable exception. One of the operators in the area has complained about livestock disappearing. It is not known whether the livestock were shot, hijacked, or wandered off. Under any circumstances, there has been a problem which needs close scrutiny in the development of future management plans.

There is a potential conflict between cows and people at the limited waterholes in the valley. Many of these waterholes are also choice recreation sites. Some accommodations will have to be made to distribute the water to alleviate this conflict. This won't settle the whole problem, however. Where there is water, there are trees--in this hot climate both cows and people need shade.

Technically, the wild burros which inhabit this area must be considered as domestic animals since the wildlifers refuse to accept them. These burros have recreation value for observation purposes and definitely should receive consideration when forage, water, cover, and other resources are allocated.

There is no reason why livestock and the recreation visitor cannot coexist together in the Red Rocks area, although there will undoubtedly have to be some changes in the carrying capacity, the season of use, and the distribution of livestock.

2. Fish and Wildlife Development and Utilization. The wildlife is considered an important recreation resource in the Red Rocks area. Fish species are nonexistent.

The same problems exist at waterholes as in the Livestock section; however, shade is not a serious problem. One additional problem exists, though, which needs careful consideration: that is the concentration of Gambel's quail around the valley water supplies. The development of recreation sites will infringe on their territory; and the hunters who come to harvest them in the fall will present a real hazard to the campers and picnickers who come in great droves in the fall.

There are some serious questions about effect increased recreation use will have on the desert bighorn sheep. This point needs to have further study.

3. Industrial Development. There is no industrial development in the area and none anticipated in the future.

4. Mineral Production. There has been no mineral production within the boundaries of the Red Rocks area. There has been some excavation for sandstone building blocks but the sandstone is so soft that this operation was terminated. There are several mining claims for building stone but it is very doubtful that any of them are valid.

There is a huge gypsum mine directly east of the area but this should have no effect on the recreation values within the Red Rocks area.

The only problem which should be considered is that the mining claims must be cleared before facility development can begin on any given site. Therefore, great care must be taken in coordinating mineral examinations with site development.

5. Occupancy. There is a small residential area which resulted from a Bureau small-tract sale in T. 21 X., R. 59 E., sec. 6. The presence of these improvements seriously detracts from the aesthetic values in Calico Basin. Additional occupancy would tend to detract from the aesthetic values that much more. There are permanent residences at the Spring Mountain Ranch, the Bonnie Spring Ranch, and the Oliver Ranch. Further expansion of residential development would seriously mar and downgrade the recreation values in the area.

6. Timber Production. The only forestry species in the area are pinyon-juniper and isolated patches of ponderosa pine. None of these species are present in quantity or quality worthy of management for timber production. The forestry types have much greater value for recreation purposes; therefore, no conflict or problem exists.

7. Watershed Protection. The Red Rock area is an important watershed which helps to recharge the underground water supply in the Las Vegas Valley and Pahrump Valley. The goals for improving the vegetative cover and reducing the intensity of flash floods is common between Recreation and Watershed Management. However, some conflicts may develop if watershed projects are proposed that would cause severe damage to the landscape, such as check dams and artificial revegetation projects. Careful study will have to be given this potential problem.

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John Donaldson	Nevada State Fish & Game Comm.	Wildlife
Ted Snyder	U.S. Geological Survey	Hydrology
Ralph Smith	" " "	"
Elbert B. Edwards	So. Nevada Historical Society	History
Ralph Conrad	BLM, Washington	Resource Management

Advisory Committees

Red Rocks Resource Committee
State Park Advisory Commission
BLM District Advisory Board

Coordination with Other Agencies

Lake Mead National Recreation Area, National Park Service
Las Vegas Ranger District, Toiyabe National Forest
Nevada State Parks Commission
Nevada Fish and Game Commission
Nevada Department of Highways
Southern Nevada Historical Society
Clark County Planning Commission
Clark County Engineering Department
Pacific Southwest Region, Bureau of Outdoor Recreation
San Francisco Service Center, National Park Service
U. S. Geological Survey, Menlo Park, California
U. S. Weather Bureau

Cartographic Services

Denver Service Center, Branch of Mapping and Drafting
Robert L. Miracle, Cartographic Technician
John Green, Cartographic Technician

Clerical Services

Denver Service Center - Virginia Calvert, Secretary

LAS VEGAS DISTRICT-NEVADA AUG., 1969